



QUARTERLY GROUNDWATER MONITORING REPORT

Third Quarter 2005 (Thirteenth Quarterly)

Sampled on August 9, 2005

Job # SP-120

LOP # 12365

Big Oil & Tire - Bigfoot Service Station (Bigfoot Gas)

2801 Central Avenue
McKinleyville, California 95519

November 10, 2005

This *Quarterly Groundwater Monitoring Report* was prepared by SounPacific Environmental Services (SounPacific) for Big Oil & Tire Co. (BO&T), using previous studies that were conducted by Clearwater Group, Inc. (CGI) and files reviewed at Humboldt County Department of Health and Human Services: Division of Environmental Health (HCDEH). The station is located at 2801 Central Avenue in McKinleyville, California (Figure 1).

SITE DESCRIPTION

The site consists of a single building surrounded by a mixture of concrete and asphalt paving and unpaved ground. The site improvements include a single story building with an attached, overhead awning that covers the main dispenser islands. The main structure covers approximately 800 square feet and is positioned near the center of the property with the entrance to the building facing west towards Central Avenue. Attached to the main structure is a small building at the north end of the property that is used for storage (Figure 2).

Two (2) 12,000-gallon split compartment underground storage tanks (USTs) are located in a single excavation between the station and Central Avenue and are used for the storage of three (3) grades of unleaded gasoline and diesel fuel. Fuel is dispensed from two (2) main dispenser islands, which are located under the awning. BO&T owns, operates, and is therefore responsible for the maintenance and testing of the product lines and the UST system on a regular basis. The site is serviced by public utilities. Surface water is controlled by drainage ditches and storm drains (Figure 2).

SITE TOPOGRAPHY AND LAND USE

SounPacific understands that the property is currently owned by BO&T of Arcata, California. The main structure is used as a retail gas station for the dispensing of three (3) grades of unleaded gasoline and diesel fuel from the USTs on site. On the north section of the property, a commercial propane tank is stored and used for the filling of smaller propane tanks for the public (Figure 2). The surrounding land use is a mixture of commercial and residential. An automobile garage is located immediately to the south across Murray Road, and properties adjacent to the east, west and north are undeveloped.

The site is approximately two (2) miles east of the Pacific Ocean and approximately 110 feet above mean sea level (amsl). The site is situated approximately 600 feet south of Norton Creek and 1,400 feet north of Widow White Creek. According to the United States Geological Survey Arcata North Quadrangle California-Humboldt County, 7.5 minute series (Topographic) 1959 (photo-revised 1972), a tributary of Norton Creek is re-routed into an underground culvert along the south side of the site. Norton Creek is also artificially controlled along the eastern side of Central Avenue near the site. These two (2) engineered drainage features intersect near the southwestern corner of the property and flow west, toward the Pacific Ocean (Figure 2). It is uncertain if the engineered drainage along the southern and western boundaries of the site will exhibit any hydraulic influence on groundwater flow directly beneath the site. Topography consists of rolling terrain that gently slopes west toward the Pacific Ocean (Figure 1).

RESULTS OF QUARTERLY SAMPLING

A quarterly groundwater monitoring program was implemented on July 15, 2002, and is currently scheduled to continue until further notice. The program consists of recording quarterly water level data and collecting quarterly groundwater samples for laboratory analysis. Water level data is used to develop a figure which displays the groundwater gradient and average flow direction using standard three-point calculations. Analytical results from groundwater samples collected from the monitoring wells during quarterly sampling events present hydrocarbon contamination levels in the groundwater beneath the site. Monitoring wells were gauged and sampled on August 9, 2005.

FIELD DATA

Wells gauged:	MW-1, 2, 3, 4, 5, and 6
Groundwater:	Ranged from 108.67 to 109.42 feet above mean sea level (Table 1)
Floating product:	Sheen detected in MW-3, 4, and 6
GW flow direction:	West-Northwest (Figure 3)
GW gradient:	0.006 feet per foot (ft/ft) (Figure 3)

On August 9, 2005 the depth to groundwater in the site's six (6) monitoring wells ranged from 2.90 feet below top of casing (btoc) in well MW-1 to 4.16 feet btoc in MW-2. When corrected to mean sea level, water level elevations ranged from 108.67 feet above mean sea level (amsl) in MW-1 to 109.42 feet amsl in MW-5. Groundwater levels for the August 9, 2005, monitoring event, along with historical levels and elevations are included in Table 1. Groundwater flow on August 9, 2005, was generally flat with a gradient towards the west-northwest at 0.006 feet per foot. The groundwater flow and gradient are graphically depicted in Figure 3. Prior to sampling, all wells were purged; the groundwater field parameters for each well are presented below.

MONITORING WELL MW-1 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm)⁻¹
3:16 pm	0	7.22	64.97	0.221
3:22	1.5	7.16	58.80	0.208
3:27	3.0	7.14	58.54	0.196
3:31	4.5	7.11	58.54	0.191

MONITORING WELL MW-2 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm)⁻¹
2:35 pm	0	6.95	59.46	0.794
2:43	1	6.99	57.76	0.771
2:47	2	6.99	57.77	0.769
2:51	3	7.00	57.70	0.753

MONITORING WELL MW-3 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm)⁻¹
3:48 pm	0	6.83	65.67	0.300
3:53	1.3	6.77	63.81	0.319
3:59	2.6	6.78	62.99	0.317
4:02	3.9	6.83	62.50	0.313

MONITORING WELL MW-4 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm)⁻¹
2:03 pm	0	7.20	74.41	0.484
2:08	1.25	7.17	66.03	0.430
2:12	2.5	7.14	65.89	0.425
2:15	3.75	7.22	66.74	0.413

MONITORING WELL MW-5 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm)⁻¹
1:27 pm	0	7.01	68.14	0.407
1:31	1.3	7.00	65.44	0.394
1:34	2.6	7.02	65.50	0.396
1:38	3.9	7.00	65.47	0.397

MONITORING WELL MW-6 GROUNDWATER FIELD PARAMETERS

Time	Total Vol. Removed/ gal	pH	Temp./ F	Cond./ ms(cm)⁻¹
4:18 pm	0	7.01	67.47	0.228
4:22	1.2	6.98	64.08	0.222
4:25	2.6	6.97	63.99	0.229
4:30	3.6	6.93	63.12	0.240

ANALYTICAL RESULTS

Sampling locations: MW-1, 2, 3, 4, 5, and 6

Analyses performed: TPHg, BTXE, MTBE, DIPE, TAME, ETBE, TBA, TPHd, TPHmo

Laboratories Used: Basic Labs, Redding, California (CA ELAP Cert #1677)

The analytical results for the current monitoring event are presented below and graphically depicted in Figure 4. The laboratory report is included as Appendix A. The historical analytical results for all monitoring wells, since the implementation of groundwater monitoring are included as Table 2.

	<u>MW-1</u> (ppb)	<u>MW-2</u> (ppb)	<u>MW-3</u> (ppb)	<u>MW-4</u> (ppb)	<u>MW-5</u> (ppb)	<u>MW-6</u> (ppb)
TPHg:	ND < 50	3,080	379	5,270	12,000	ND < 50
Benzene:	ND < 0.5	ND < 2.5	ND < 1.0	59.5	ND < 10	0.8
Toluene:	ND < 0.5	ND < 2.5	ND < 1.0	53.2	45.8	ND < 0.5
Xylenes:	ND < 1.0	ND < 5.0	ND < 2.0	299	3,160	ND < 1.0
Ethylbenzene:	ND < 0.5	ND < 2.5	ND < 1.0	210	322	ND < 0.5
MTBE:	1.6	1,970	252	14.2	ND < 20	8.2
DIPE:	ND < 0.5	ND < 2.5	ND < 1.0	ND < 1.2	ND < 10	ND < 0.5
TAME:	ND < 0.5	787	102	1.9	ND < 10	3.2
ETBE:	ND < 0.5	5.8	ND < 1.0	ND < 1.2	ND < 10	ND < 0.5
TBA:	ND < 50	373	ND < 100	ND < 125	ND < 1,000	ND < 50
TPHd:	ND < 50	520	63	929	1,350	ND < 50
TPHmo:	ND < 50	312	76	147	177	87

ND = non-detectable

COMMENTS AND RECOMMENDATIONS

On August 9, 2005, the 13th groundwater monitoring event for the six (6) onsite monitoring wells was conducted at the Bigfoot Gas Station at 2801 Central Avenue in McKinleyville, California. A summary of the results are presented below.

- The depth to groundwater in the six (6) wells ranged between 2.90 and 4.16 feet btoc. Groundwater flow was towards the west-northwest at a gradient of 0.006 feet per foot.
- Groundwater samples from the six (6) onsite wells were collected and analyzed for TPHg, BTXE, five (5) fuel-oxygenates, TPHd, and TPHmo. Laboratory results reported TPHg in four (4) wells at concentrations ranging from 379 ppb (MW-3) to 12,000 ppb (MW-5). Benzene was reported in two (2) wells at concentrations of 0.8 ppb (MW-6) and 59.5 ppb (MW-4). Toluene, xylenes, and ethylbenzene were reported in wells MW-4 and MW-5, at concentrations of 45.8 ppb (MW-5) and 53.2 ppb (MW-4) for toluene, 299 ppb (MW-4), and 3,160 ppb (MW-5) for xylenes, and ethylbenzene at concentrations of 210 ppb (MW-4) and 322 ppb (MW-5). Of the fuel-oxygenates, MTBE was reported in all wells except MW-5, with concentrations ranging from 1.6 ppb (MW-1) to 1,970 ppb (MW-2). TAME was reported in four (4) wells at concentrations ranging between 1.9 ppb (MW-4) and 787 ppb (MW-2). ETBE and TBA were reported in well MW-2 at a concentration of 5.8 ppb and 373 ppb respectively, and DIPE was not reported in any wells. TPHd was reported in four (4) wells at concentrations ranging from 63 ppb (MW-3) to 1,350 ppb (MW-5). TPHmo was reported in five (5) wells at concentrations ranging from 76 ppb (MW-3) to 312 ppb (MW-2).

Based upon these results the following observations and conclusions have been made.

- TPHg has consistently been reported in all wells, except MW-1, although it has been absent in well MW-6 during the last three (3) monitoring events. TPHg has been absent in monitoring well MW-1, since the 4th Quarter 2002 sampling event. TPHg has been

consistently detected in well MW-2 at high concentrations, except for the 3rd Quarter 2003, in which the detection limits were raised to 5,000 ppb. Concentrations of TPHg have been detected in wells MW-3 and MW-6 at various times and seem to be fluctuating. The highest concentrations of TPHg have been consistently detected in wells MW-4 and MW-5 since the inception of the monitoring program. See Figures 5 through 10.

- No BTXE compounds have been reported in MW-1 since the Well Installation sampling event. BTXE has been reported in wells MW-2, MW-3, and MW-6 during various sampling events at fluctuating concentrations. BTXE has been reported in wells MW-4 and MW-5 at high levels for the majority of sampling events to date at fluctuating concentrations. See Figures 5 through 10.
- MTBE has been reported in wells MW-2 and MW-3 during every sampling event thus far. Concentrations fluctuate in the range of 10^3 ppb in MW-2 and from 10^2 to 10^3 ppb in MW-3. With the exception of a few monitoring events, MTBE has consistently been reported in wells MW-1, MW-4, and MW-6, with a general decreasing trend in concentration in MW-4 and particularly in well MW-6. MTBE has not been reported in MW-5 since the 4th Quarter 2002 sampling event, although the elevated reporting limit may be masking its presence. See Figures 5 through 10.
- DIPE has not been reported in any wells since the inception of the monitoring program.
- TAME has been reported in MW-1 during multiple sampling events at low concentrations. TAME has consistently been reported in wells MW-2 and MW-3, since the inception of the monitoring, although concentrations in these wells have significantly fluctuated. TAME has been reported four (4) times in MW-4 and one (1) time in MW-5. In MW-6, TAME has been detected during multiple sampling events, with an overall decrease in concentrations.
- ETBE has only been reported in well MW-2, where it has been reported four (4) times

since the inception of the monitoring program.

- TBA has occasionally been reported in wells MW-2, MW-3, and MW-6, but has never been reported in MW-1, MW-4, or MW-5.
- With the exception of the 3rd Quarter 2004 monitoring event, TPHd has not been reported in MW-1. TPHd was reported in MW-2 consistently during the last nine (9) sampling events and in MW-3 and MW-5 during the last six (6) sampling events. TPHd has frequently been reported in wells MW-4, MW-5, and MW-6, with concentrations varying from 10^2 to 10^3 ppb since the inception of groundwater monitoring. See Figures 5 through 10.
- TPHmo has not been reported in well MW-1 since the inception of the monitoring program. TPHmo has been reported in the remaining five (5) wells during the last three (3) quarters, however, its presence coincides with a reduction in the reporting limit (from 500 ppb to 50 ppb). The lower reporting limit used currently, may portray the TPHmo trend more accurately in upcoming monitoring events.
- Lead scavenger EDC has been reported at low concentrations (<2 ppb) during multiple events in MW-3. EDC was also reported in MW-6 during the 2nd Quarter 2003. EDC has not been reported in any other well since the inception of monitoring, and EDB has never been reported in any well. EBC and EDB have not been sampled for during the last three (3) monitoring events.

Based on the results of the August 2005 monitoring event and historical results, the following future activities are proposed:

- Groundwater monitoring will be continued until further notice. Groundwater level measurements will be collected from the six (6) onsite monitoring wells to determine groundwater flow direction and gradient. Collected groundwater samples will be analyzed for TPHg, BTXE, five (5) fuel-oxygenates, TPHd, and TPHmo.
- Groundwater analytical results from the monitoring program have indicated that potential primary or secondary sources may still exist and might be contributing mass to the observed groundwater plume. Additionally, the full extent of the groundwater contamination has not been defined. To determine if this is the case, SounPacific is currently scheduling the next phase of subsurface investigational work. The proposed work was outlined in the Work Plan, dated August 3, 2005 and the SounPacific letter of October 20, 2005, and approved in the corresponding HCDEH letters of August 22, 2005 and October 27, 2005.

CERTIFICATION

This report was prepared under the direct supervision of a California registered geologist at SounPacific. All information provided in this report including statements, conclusions and recommendations are based solely upon field observations and analyses performed by a state-certified laboratory. SounPacific is not responsible for laboratory errors.

SounPacific promises to perform all its work in a manner that is currently used by members in similar professions working in the same geographic area. SounPacific will do whatever is reasonable to ensure that data collection is accurate. Please note however, that rain, buried utilities, and other factors can influence groundwater depths, directions and other factors beyond what SounPacific could reasonably determine.

SounPacific

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ATTACHMENTS

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APPENDICES

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Tables & Chart

Table 1 (cont.)**Water Levels**

Bigfoot Gas

2801 Central Avenue

McKinleyville, Californian 95519

Sample Location	Date	Depth to Bottom/ Feet BGS	Survey Height/ Feet Above MSL	Depth to Water/ Feet BGS	Adjusted Elevation/ Feet Above MSL
MW-3	5/1/2002	11.39	112.13	2.15	109.98
	5/30/2002	11.24	112.13	2.94	109.19
	7/3/2002	11.25	112.13	3.41	108.72
	8/3/2002	11.24	112.13	3.84	108.29
	9/4/2002	11.21	112.13	4.32	107.81
	10/4/2002	11.22	112.13	4.69	107.44
	11/4/2002	11.22	112.13	4.83	107.30
	12/2/2002	11.23	112.13	4.02	108.11
	1/6/2003	11.25	112.13	1.91	110.22
	2/5/2003	11.25	112.13	2.00	110.13
	3/7/2003	11.29	112.13	2.30	109.83
	4/8/2003	11.29	112.13	1.69	110.44
	5/12/2003	11.29	112.13	1.99	110.14
	8/2/2003	11.46	112.13	3.57	108.56
	11/8/2003	11.46	112.13	3.00	109.13
	2/5/2004	11.46	112.13	1.91	110.22
	5/4/2004	11.46	112.13	2.61	109.52
	8/9/2004	11.46	112.13	4.14	107.99
	11/5/2004	11.40	112.13	2.67	109.46
	2/6/2005	11.40	112.13	2.30	109.83
	5/13/2005	11.42	112.13	1.98	110.15
	8/9/2005	11.50	112.13	3.40	108.73
MW-4	5/1/2002	11.34	112.76	2.44	110.32
	5/30/2002	11.14	112.76	3.28	109.48
	7/3/2002	11.11	112.76	3.84	108.92
	8/3/2002	11.14	112.76	4.32	108.44
	9/4/2002	11.12	112.76	4.86	107.90
	10/4/2002	11.12	112.76	5.24	107.52
	11/4/2002	11.05	112.76	5.36	107.40
	12/2/2002	11.08	112.76	4.51	108.25
	1/6/2003	11.05	112.76	2.04	110.72
	2/5/2003	11.06	112.76	2.17	110.59
	3/7/2003	11.24	112.76	2.51	110.25
	4/8/2003	11.24	112.76	1.69	111.07
	5/12/2003	11.24	112.76	3.14	109.62
	8/2/2003	11.32	112.76	4.03	108.73
	11/8/2003	11.32	112.76	3.31	109.45
	2/5/2004	11.32	112.76	2.03	110.73
	5/4/2004	11.32	112.76	2.85	109.91
	8/9/2004	11.32	112.76	4.64	108.12
	11/5/2004	11.20	112.76	2.87	109.89
	2/6/2005	11.27	112.76	2.51	110.25
	5/13/2005	11.24	112.76	2.14	110.62
	8/9/2005	11.49	112.76	3.77	108.99

Table 1 (cont.)
Water Levels
 Bigfoot Gas
 2801 Central Avenue
 McKinleyville, California 95519

Sample Location	Date	Depth to Bottom/ Feet BGS	Survey Height/ Feet Above MSL	Depth to Water/ Feet BGS	Adjusted Elevation/ Feet Above MSL
MW-5	5/1/2002	11.10	112.62	1.43	111.19
	5/30/2002	11.11	112.62	2.71	109.91
	7/3/2002	11.12	112.62	3.31	109.31
	8/3/2002	11.14	112.62	3.85	108.77
	9/4/2002	11.12	112.62	4.37	108.25
	10/4/2002	11.15	112.62	4.85	107.77
	11/4/2002	11.15	112.62	4.97	107.65
	12/2/2002	11.13	112.62	4.02	108.60
	1/6/2003	11.15	112.62	1.11	111.51
	2/5/2003	11.18	112.62	1.23	111.39
	3/7/2003	11.15	112.62	1.70	110.92
	4/8/2003	11.15	112.62	0.95	111.67
	5/12/2003	11.15	112.62	1.33	111.29
	8/2/2003	11.36	112.62	3.53	109.09
	11/8/2003	11.36	112.62	2.67	109.95
	2/5/2004	11.36	112.62	1.10	111.52
	5/4/2004	11.36	112.62	2.18	110.44
	8/9/2004	11.35	112.62	4.17	108.45
	11/5/2004	11.34	112.62	2.19	110.43
	2/6/2005	11.32	112.62	1.62	111.00
	5/13/2005	11.30	112.62	1.24	111.38
	8/9/2005	11.20	112.62	3.20	109.42
MW-6	5/1/2002	10.92	112.38	2.31	110.07
	5/30/2002	10.91	112.38	3.13	109.25
	7/3/2002	10.91	112.38	3.64	108.74
	8/3/2002	10.92	112.38	4.09	108.29
	9/4/2002	10.93	112.38	4.61	107.77
	10/4/2002	10.96	112.38	4.99	107.39
	11/4/2002	10.92	112.38	5.05	107.33
	12/2/2002	10.93	112.38	4.27	108.11
	1/6/2003	10.93	112.38	2.05	110.33
	2/5/2003	10.95	112.38	2.14	110.24
	3/7/2003	10.95	112.38	2.46	109.92
	4/8/2003	10.95	112.38	1.82	110.56
	5/12/2003	10.95	112.38	3.12	109.26
	8/2/2003	11.13	112.38	3.81	108.57
	11/8/2003	11.13	112.38	3.03	109.35
	2/5/2004	11.13	112.38	2.07	110.31
	5/4/2004	11.13	112.38	2.75	109.63
	8/9/2004	11.18	112.38	4.39	107.99
	11/5/2004	11.03	112.38	2.76	109.62
	2/6/2005	11.04	112.38	2.44	109.94
	5/13/2005	10.95	112.38	2.06	110.32
	8/9/2005	11.00	112.38	3.55	108.83

Notes:

Bgs: Below Ground Surface

MSL: Mean Sea Level

Table 2
Groundwater Analytical Results from Monitoring Wells

Bigfoot Gas
2801 Central Avenue
McKinleyville, California 95519

Sample Location	Sample Event	Annual Quarter	Sample Date	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Xylenes (ppb)	Ethylbenzene (ppb)	MTBE (ppb)	DIPE (ppb)	TAME (ppb)	ETBE (ppb)	TBA (ppb)	TPHd (ppb)	TPHmo (ppb)	EDC (ppb)	EDB (ppb)
MW-1	Well Installation	2nd Quarter	5/1/2002	ND < 50	ND < 0.3	0.3	ND < 0.6	ND < 0.3	10.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 100	ND < 50	ND < 50	----	----
	1st Quarterly	3rd Quarter	8/3/2002	91	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	114	ND < 0.5	7.5	ND < 0.5	ND < 100	ND < 50	ND < 50	----	----
	2nd Quarterly	4th Quarter	11/4/2002	90.4	ND < 0.3	ND < 0.3	ND < 0.6	ND < 0.3	94.7	ND < 0.5	7.6	ND < 0.5	ND < 50	ND < 50	ND < 50	ND < 0.5	ND < 0.5
	3rd Quarterly	1st Quarter	2/5/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	4th Quarterly	2nd Quarter	5/12/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	5th Quarterly	3rd Quarter	8/2/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	23	ND < 0.5	1.0	ND < 0.5	ND < 5.0	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	6th Quarterly	4th Quarter	11/8/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	88	ND < 0.5	3.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	7th Quarterly	1st Quarter	2/5/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	8th Quarterly	2nd Quarter	5/4/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	0.5	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	9th Quarterly	3rd Quarter	8/9/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.5	ND < 0.5	34.0	ND < 0.5	1.2	ND < 0.5	ND < 5.0	160	ND < 500	ND < 0.5	ND < 0.5
	10th Quarterly	4th Quarter	11/5/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1.5	ND < 0.5	14	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	11th Quarterly	1st Quarter	2/6/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	ND < 50	ND < 50	----	----
	12th Quarterly	2nd Quarter	5/13/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	ND < 1.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	ND < 50	ND < 50	----	----
	13th Quarterly	3rd Quarter	8/9/2005	ND < 50.0	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	1.6	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50.0	ND < 50	ND < 50	----	----
MW-2	Well Installation	2nd Quarter	5/1/2002	498	ND < 0.3	ND < 0.3	3.9	1.3	1,380	ND < 0.5	552	ND < 0.5	ND < 100	ND < 50	ND < 50	----	----
	1st Quarterly	3rd Quarter	8/3/2002	8,870	15.7	0.5	3.9	2.2	8,160	ND < 0.5	3,460	ND < 0.5	ND < 100	ND < 50	ND < 50	----	----
	2nd Quarterly	4th Quarter	11/4/2002	674	28.3	ND < 0.3	ND < 0.6	ND < 0.3	1,130	ND < 0.5	526	ND < 0.5	ND < 50	ND < 50	ND < 50	ND < 0.5	ND < 0.5
	3rd Quarterly	1st Quarter	2/5/2003	1,200	0.5	ND < 0.5	ND < 1	ND < 0.5	1,900	ND < 0.5	800	4.9	690	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	4th Quarterly	2nd Quarter	5/12/2003	540	ND < 50	ND < 50	ND < 100	ND < 50	730	ND < 50	140	ND < 50	ND < 500	ND < 50	ND < 500	ND < 50	ND < 50
	5th Quarterly	3rd Quarter	8/2/2003	ND < 5,000	ND < 50	ND < 50	ND < 100	ND < 50	1,200	ND < 50	430	ND < 50	ND < 500	ND < 500	ND < 500	ND < 50	ND < 50
	6th Quarterly	4th Quarter	11/8/2003	790	ND < 50	ND < 50	ND < 100	ND < 50	4,200	ND < 50	1,800	ND < 50	ND < 500	150	ND < 500	ND < 50	ND < 50
	7th Quarterly	1st Quarter	2/5/2004	440	ND < 50	85	120	ND < 50	1,700	ND < 50	860	ND < 50	ND < 500	93	ND < 500	ND < 50	ND < 50
	8th Quarterly	2nd Quarter	5/4/2004	1,300	ND < 50	ND < 50	ND < 10.0	ND < 5.0	1,200	ND < 50	530	ND < 50	ND < 500	190	ND < 500	ND < 50	ND < 50
	9th Quarterly	3rd Quarter	8/9/2004	1,900	ND < 50	ND < 50	ND < 15.0	ND < 5.0	2,700	ND < 5.0	1,100	7.2	730	420	ND < 500	ND < 5.0	ND < 5.0
	10th Quarterly	4th Quarter	11/5/2004	1,400	5.8	ND < 50	ND < 15.0	ND < 5.0	970	ND < 5.0	460	ND < 5.0	230	160	ND < 500	ND < 5.0	ND < 5.0
	11th Quarterly	1st Quarter	2/6/2005	1,230	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	1,170	ND < 0.5	504	3.6	279	208	166	----	----
	12th Quarterly	2nd Quarter	5/13/2005	658	ND < 2.0	ND < 2.0	ND < 4.0	ND < 2.0	533	ND < 2.0	241	ND < 2.0	ND < 200	136	120	----	----
	13th Quarterly	3rd Quarter	8/9/2005	3,080	ND < 2.5	ND < 2.5	ND < 5.0	ND < 2.5	1,970	ND < 2.5	787	5.8	373	520	312	----	----
MW-3	Well Installation	2nd Quarter	5/1/2002	102	2.9	ND < 0.3	5.0	0.8	153	ND < 0.5	46.3	ND < 0.5	ND < 100	ND < 50	ND < 50	----	----
	1st Quarterly	3rd Quarter	8/3/2002	8,260	383	145	1,970	420	4,000	ND < 0.5	1,580	ND < 0.5	ND < 100	916	ND < 50	----	----
	2nd Quarterly	4th Quarter	11/4/2002	537	30.8	0.7	39.5	24.9	928	ND < 0.5	358	ND < 0.5	ND < 50	ND < 50	ND < 50	ND < 0.5	ND < 0.5
	3rd Quarterly	1st Quarter	2/5/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	100	ND < 0.5	27	ND < 0.5	17	ND < 50	ND < 500	1.6	ND < 0.5
	4th Quarterly	2nd Quarter	5/12/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	28	ND < 0.5	5.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	1.2	ND < 0.5
	5th Quarterly	3rd Quarter	8/2/2003	6,400	75	ND < 5.0	1,000	460	1,200	ND < 5.0	540	ND < 5.0	530	ND < 50	ND < 500	ND < 5.0	ND < 5.0
	6th Quarterly	4th Quarter	11/8/2003	52	ND < 0.5	ND < 0.5	1.2	0.5	120	ND < 0.5	68	ND < 0.5	ND < 5.0	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	7th Quarterly	1st Quarter	2/5/2004	ND < 50	ND < 0.5	ND < 0.5	ND < 1	ND < 0.5	40	ND < 0.5	9.4	ND < 0.5	ND < 5.0	ND < 50	ND < 500	0.9	ND < 0.5
	8th Quarterly	2nd Quarter	5/4/2004	82	ND < 0.5	ND < 0.5	0.5	ND < 0.5	57	ND < 0.5	32	ND < 0.5	ND < 5.0	55	ND < 500	ND < 0.5	ND < 0.5
	9th Quarterly	3rd Quarter	8/9/2004	970	6.0	ND < 0.5	ND < 1.5	3.6	1,500	ND < 0.5	530	ND < 0.5	90	250	ND < 500	1.5	ND < 0.5
	10th Quarterly	4th Quarter	11/5/2004	100	ND < 0.5	ND < 0.5	ND < 1.5	ND < 0.5	63	ND < 0.5	19	ND < 0.5	ND < 5.0	240	ND < 500	ND < 0.5	ND < 0.5
	11th Quarterly	1st Quarter	2/6/2005	183	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	172	ND < 0.5	56.1	ND < 0.5	ND < 50	51	95	----	----
	12th Quarterly	2nd Quarter	5/13/2005	183	ND < 1.2	ND < 1.2	ND < 2.5	ND < 1.2	163	ND < 1.2	52.6	ND < 1.2	ND < 125	70	84	----	----
	13th Quarterly	3rd Quarter	8/9/2005	379	ND < 1.0	ND < 1.0	ND < 2.0	ND < 1.0	252	ND < 1.0	102	ND < 1.0	ND < 100	63	76	----	----

TPHg: Total petroleum hydrocarbons as gasoline
MTBE: Methyl tertiary butyl ether
DIPE: Diisopropyl ether
TAME: Tertiary amyl methyl ether
TPHd: Total petroleum hydrocarbons as diesel

TBA: Tertiary butanol
ETBE: Ethyl tertiary butyl ether
TPHmo: Total petroleum hydrocarbons as motor oil
ppb: parts per billion = µg/l = .001 mg/l = 0.001 ppm.
ND: Not detected. Sample was detected at or below the method detection limit as shown.

Table 2 (cont.)
Groundwater Analytical Results from Monitoring Wells
 Bigfoot Gas
 2801 Central Avenue
 McKinleyville, California 95519

Sample Location	Sample Event	Annual Quarter	Sample Date	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Xylenes (ppb)	Ethylbenzene (ppb)	MTBE (ppb)	DIPE (ppb)	TAME (ppb)	ETBE (ppb)	TBA (ppb)	TPHd (ppb)	TPHmo (ppb)	EDC (ppb)	EDB (ppb)
MW-4	Well Installation	2nd Quarter	5/1/2002	7,970	157	356	1,270	483	ND < 20	ND < 5	ND < 5	ND < 5	ND < 1,000	489	ND < 50	----	----
	1st Quarterly	3rd Quarter	8/3/2002	9,150	193	720	2,430	1,080	53	ND < 15	ND < 15	ND < 15	ND < 5,000	2,770	ND < 50	----	----
	2nd Quarterly	4th Quarter	11/4/2002	6,090	207	343	712	530	ND < 2.0	ND < 0.5	ND < 0.5	ND < 0.5	ND < 50	159	ND < 50	ND < 0.5	ND < 0.5
	3rd Quarterly	1st Quarter	2/5/2003	20,000	170	120	890	600	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50	2,000	ND < 500	ND < 5.0	ND < 5.0
	4th Quarterly	2nd Quarter	5/12/2003	6,200	96	77	248	220	ND < 50	ND < 50	ND < 50	ND < 50	ND < 500	680	ND < 500	ND < 50	ND < 50
	5th Quarterly	3rd Quarter	8/2/2003	7,700	130	59	406	470	31	ND < 5.0	20	ND < 5.0	ND < 50	ND < 50	ND < 500	ND < 5.0	ND < 5.0
	6th Quarterly	4th Quarter	11/8/2003	7,900	260	190	385	480	56	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50	500	ND < 500	ND < 5.0	ND < 5.0
	7th Quarterly	1st Quarter	2/5/2004	7,600	180	110	334	460	29	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50	ND < 50	ND < 500	ND < 5.0	ND < 5.0
	8th Quarterly	2nd Quarter	5/4/2004	8,000	130	140	504	420	19	ND < 5.0	ND < 5.0	ND < 5.0	ND < 50	1,300	ND < 500	ND < 5.0	ND < 5.0
	9th Quarterly	3rd Quarter	8/9/2004	5,600	120	44	302	360	67	ND < 5.0	13	ND < 5.0	ND < 50	850	ND < 500	ND < 5.0	ND < 5.0
	10th Quarterly	4th Quarter	11/5/2004	58	1.0	ND < 0.5	ND < 1.5	ND < 0.5	6.7	ND < 0.5	2.8	ND < 0.5	ND < 5.0	120	ND < 500	ND < 0.5	ND < 0.5
	11th Quarterly	1st Quarter	2/6/2005	6,230	83.5	120	602	343	11.5	ND < 2.0	ND < 2.0	ND < 2.0	ND < 200	729	121	----	----
	12th Quarterly	2nd Quarter	5/13/2005	3,950	31.4	80.4	493	193	ND < 5.0	ND < 2.5	ND < 2.5	ND < 2.5	ND < 250	708	106	----	----
	13th Quarterly	3rd Quarter	8/9/2005	5,270	59.5	53.2	299	210	14.2	ND < 1.2	1.9	ND < 1.2	ND < 125	929	147	----	----
MW-5	Well Installation	2nd Quarter	5/1/2002	63,800	ND < 150	1,270	19,500	1,720	ND < 1,000	ND < 250	ND < 250	ND < 250	ND < 50,000	4,420	396	----	----
	1st Quarterly	3rd Quarter	8/3/2002	30,500	ND < 15	486	17,700	1,760	ND < 25	ND < 15	ND < 15	ND < 15	ND < 5,000	9,630	ND < 50	----	----
	2nd Quarterly	4th Quarter	11/4/2002	81,000	789	ND < 300	24,600	3,710	2,330	ND < 500	1,570	ND < 500	ND < 100,000	3,870	ND < 50	ND < 500	ND < 500
	3rd Quarterly	1st Quarter	2/5/2003	78,000	51	1,600	16,800	1,600	ND < 50	ND < 50	ND < 50	ND < 50	ND < 500	ND < 50	ND < 500	ND < 50	ND < 50
	4th Quarterly	2nd Quarter	5/12/2003	43,000	ND < 50	790	13,400	1,200	ND < 50	ND < 50	ND < 50	ND < 50	ND < 500	4,100	ND < 500	ND < 50	ND < 50
	5th Quarterly	3rd Quarter	8/2/2003	17,000	ND < 50	120	3,890	400	ND < 50	ND < 50	ND < 50	ND < 50	ND < 500	ND < 50	ND < 500	ND < 50	ND < 50
	6th Quarterly	4th Quarter	11/8/2003	43,000	ND < 50	760	16,100	1,500	ND < 50	ND < 50	ND < 50	ND < 50	ND < 500	4,100	ND < 500	ND < 50	ND < 50
	7th Quarterly	1st Quarter	2/5/2004	39,000	50	1,400	22,500	2,000	ND < 50	ND < 50	ND < 50	ND < 50	ND < 500	ND < 50	ND < 500	ND < 50	ND < 50
	8th Quarterly	2nd Quarter	5/4/2004	54,000	ND < 50	720	12,800	1,300	ND < 50	ND < 50	ND < 50	ND < 50	ND < 500	19,000	ND < 500	ND < 50	ND < 50
	9th Quarterly	3rd Quarter	8/9/2004	37,000	ND < 50	320	10,000	1,100	ND < 50	ND < 50	ND < 50	ND < 50	ND < 500	8,500	ND < 500	ND < 50	ND < 50
	10th Quarterly	4th Quarter	11/5/2004	9,800	ND < 50	68	1,940	170	ND < 50	ND < 50	ND < 50	ND < 50	ND < 500	890	ND < 500	ND < 50	ND < 50
	11th Quarterly	1st Quarter	2/6/2005	13,800	5.5	174	4,090	407	ND < 10	ND < 5.0	ND < 5.0	ND < 5.0	ND < 500	1,650	151	----	----
	12th Quarterly	2nd Quarter	5/13/2005	12,600	ND < 10	197	4,050	393	ND < 20	ND < 10	ND < 10	ND < 10	ND < 1,000	1,190	113	----	----
	13th Quarterly	3rd Quarter	8/9/2005	12,000	ND < 10.0	45.8	3,160	322	ND < 20.0	ND < 10.0	ND < 10.0	ND < 10.0	ND < 1,000	1,350	177	----	----
MW-6	Well Installation	2nd Quarter	5/1/2002	3,750	845	576	1,070	155	980	ND < 0.5	791	ND < 0.5	ND < 100	ND < 50	ND < 50	----	----
	1st Quarterly	3rd Quarter	8/3/2002	11,800	508	62	8,630	1,640	750	ND < 15	300	ND < 15	ND < 5,000	1,900	ND < 50	----	----
	2nd Quarterly	4th Quarter	11/4/2002	9,480	535	35.2	3,420	743	1,330	ND < 0.5	558	ND < 0.5	ND < 50	190	ND < 50	ND < 0.5	ND < 0.5
	3rd Quarterly	1st Quarter	2/5/2003	4,500	20	ND < 5.0	583	190	ND < 5.0	ND < 5.0	17	ND < 5.0	ND < 50	1,200	ND < 500	ND < 5.0	ND < 5.0
	4th Quarterly	2nd Quarter	5/12/2003	2,200	22	1.2	244	160	68	ND < 0.5	14	ND < 0.5	60	280	ND < 500	0.9	ND < 0.5
	5th Quarterly	3rd Quarter	8/2/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	1	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	2,500	ND < 0.5	ND < 0.5
	6th Quarterly	4th Quarter	11/8/2003	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	1.3	ND < 0.5	ND < 0.5	ND < 0.5	ND < 5.0	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	7th Quarterly	1st Quarter	2/5/2004	110	4.2	ND < 0.5	ND < 1.0	ND < 0.5	16	ND < 0.5	5.6	ND < 0.5	ND < 5.0	ND < 50	ND < 500	ND < 0.5	ND < 0.5
	8th Quarterly	2nd Quarter	5/4/2004	2,200	25	2.4	200.5	4.0	69	ND < 0.5	17	ND < 0.5	27	590	ND < 500	ND < 0.5	ND < 0.5
	9th Quarterly	3rd Quarter	8/9/2004	880	14	ND < 5.0	ND < 1.5	ND < 5.0	220	ND < 5.0	16	ND < 5.0	280	470	ND < 500	ND < 5.0	ND < 5.0
	10th Quarterly	4th Quarter	11/5/2004	110	3.6	ND < 0.5	ND < 1.5	ND < 0.5	16	ND < 0.5	3.2	ND < 0.5	ND < 5.0	1,000	ND < 500	ND < 0.5	ND < 0.5
	11th Quarterly	1st Quarter	2/6/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	3.6	ND < 0.5	1.0	ND < 0.5	ND < 50	ND < 50	86	----	----
	12th Quarterly	2nd Quarter	5/13/2005	ND < 50	ND < 0.5	ND < 0.5	ND < 1.0	ND < 0.5	2.1	ND < 0.5	0.8	ND < 0.5	ND < 50	ND < 50	71	----	----
	13th Quarterly	3rd Quarter	8/9/2005	ND < 50.0	0.8	ND < 0.5	ND < 1.0	ND < 0.5	8.2	ND < 0.5	3.2	ND < 0.5	ND < 50.0	ND < 50	87	----	----

TPHg: Total petroleum hydrocarbons as gasoline

MTBE: Methyl tertiary butyl ether

DIPE: Diisopropyl ether

TAME: Tertiary amyl methyl ether

TPHd: Total petroleum hydrocarbons as diesel

TBA: Tertiary butanol

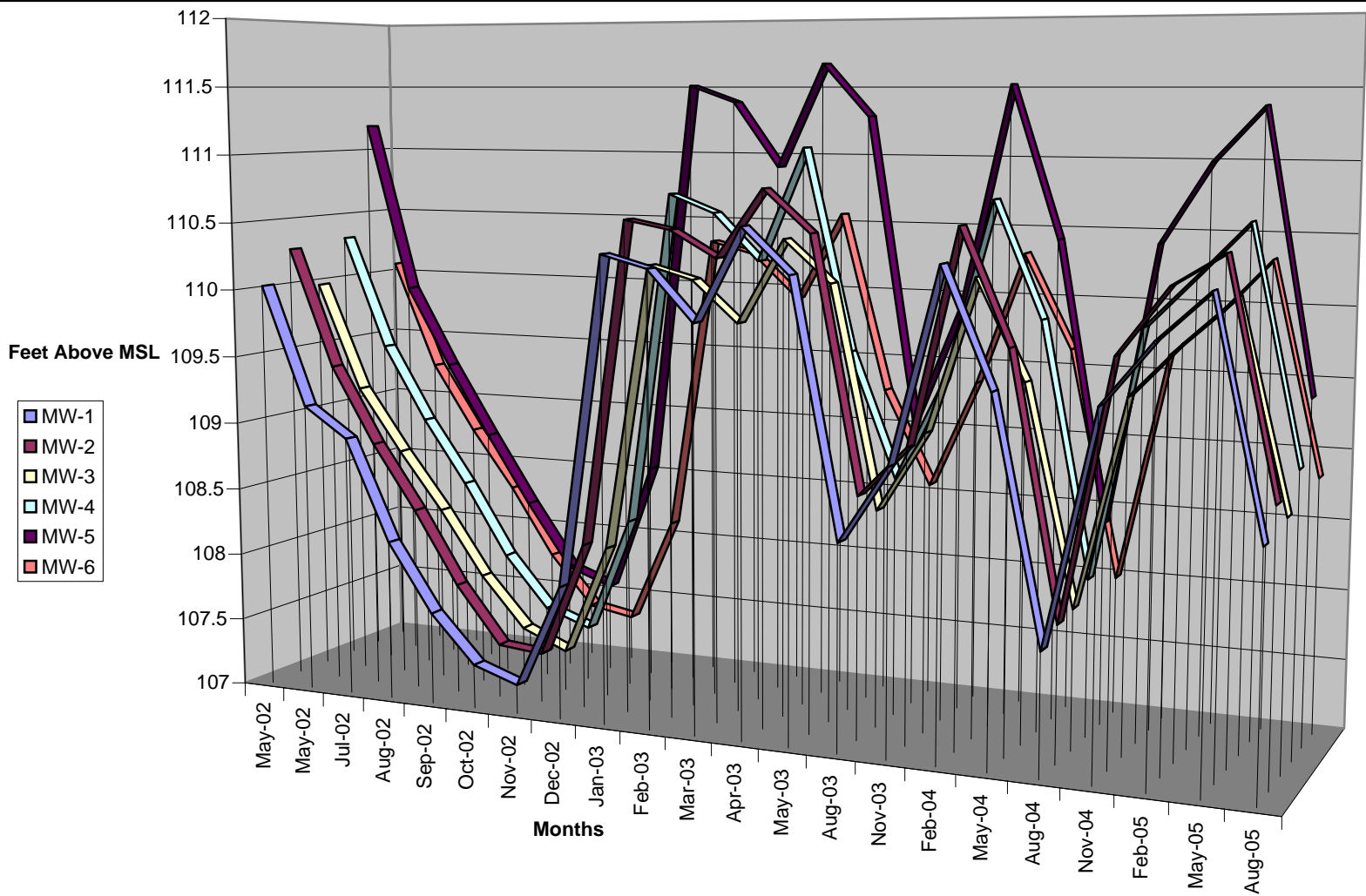
ETBE: Ethyl tertiary butyl ether

TPHmo: Total petroleum hydrocarbons as motor oil

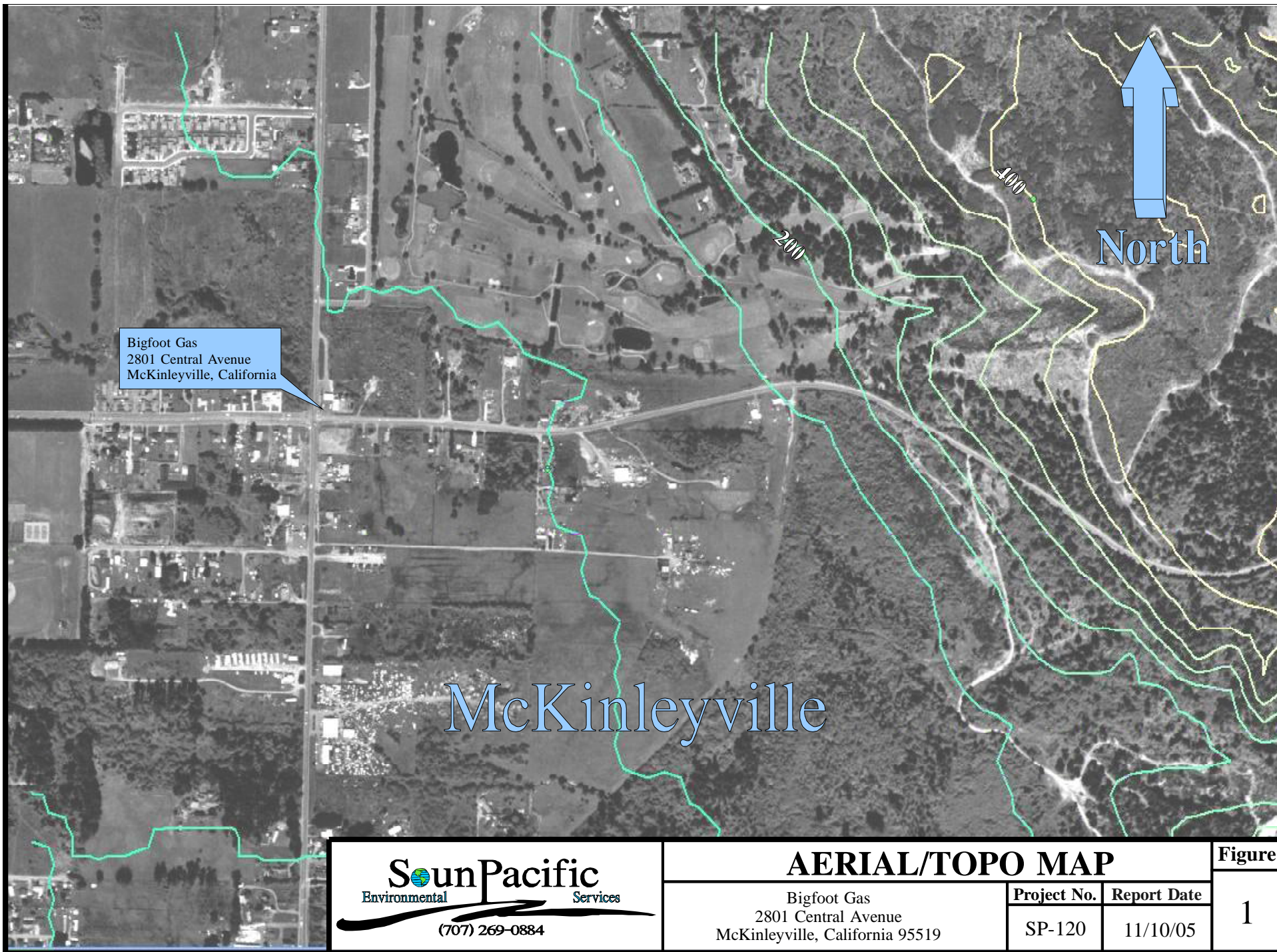
ppb: parts per billion = µg/l = .001 mg/l = 0.001 ppm.

ND: Not detected. Sample was detected at or below the method detection limit as shown.

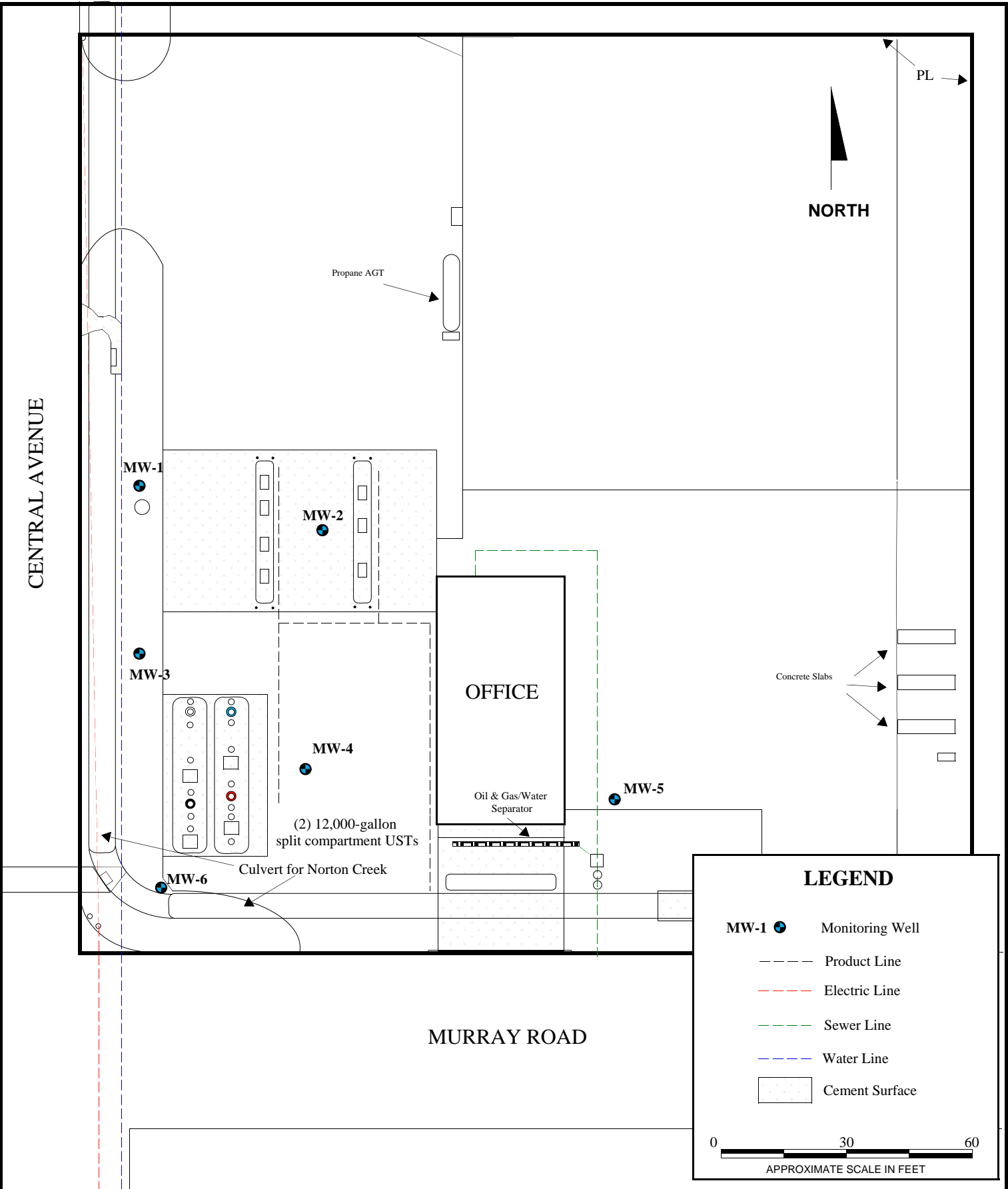
Chart 1
Hydrograph
Bigfoot Gas
2801 Central Avenue
McKinleyville, California 95519



Figures



 Soun Pacific Environmental Services (707) 269-0884	AERIAL/TOPO MAP		Figure
	Bigfoot Gas 2801 Central Avenue McKinleyville, California 95519	Project No. SP-120	Report Date 11/10/05
			1



SITE PLAN

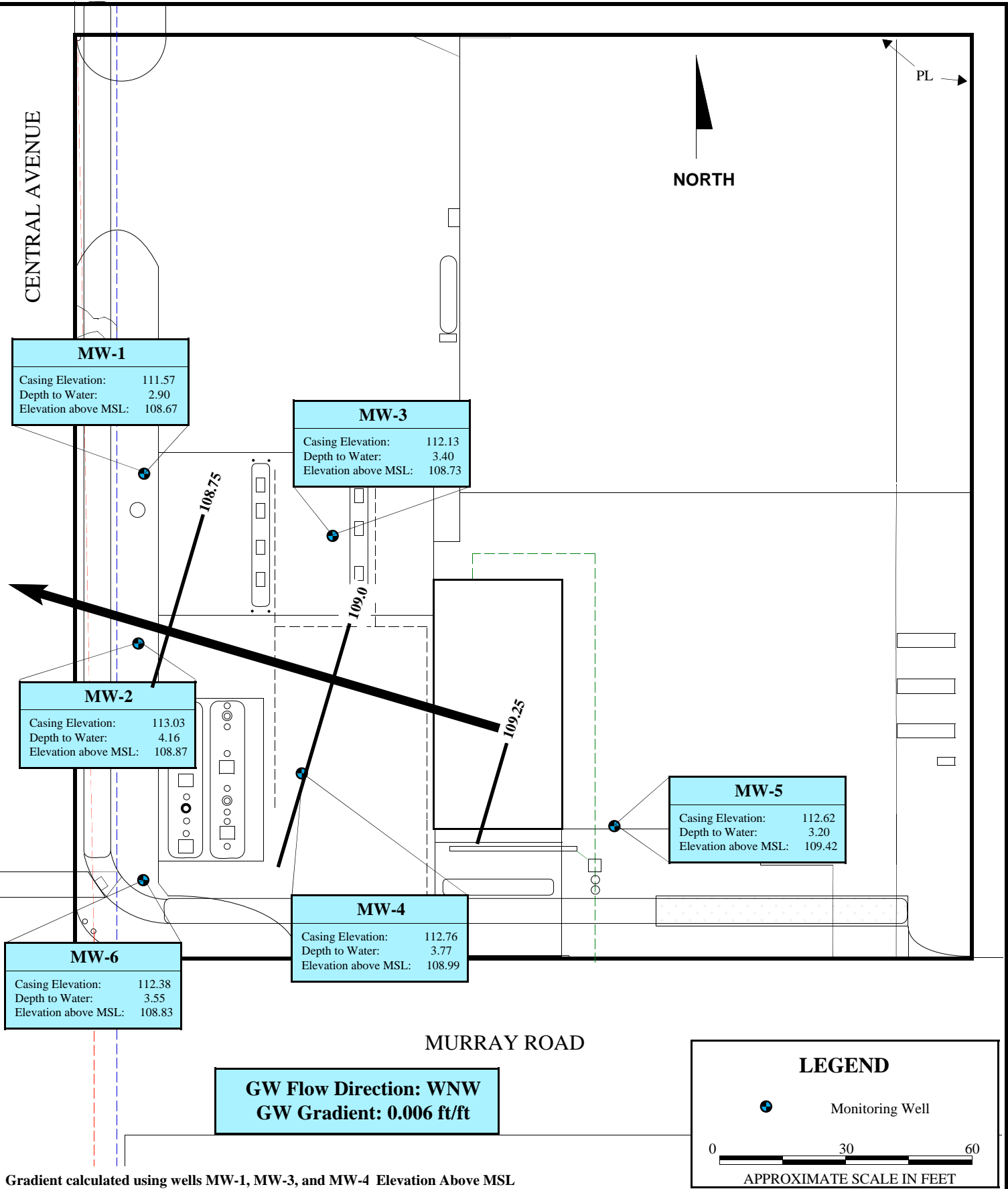
Bigfoot Gas
2801 Central Avenue
McKinleyville, California 95519

Project No.
SP-120

Report Date
11/10/05

Figure

2



GROUNDWATER GRADIENT MAP				Figure
August 2005				3
<div> <div>Environmental</div> <div>Services</div> </div>	Bigfoot Gas 2801 Central Avenue McKinleyville, California 95519	Project No.	Report Date	
		SP-120	11/10/05	

CENTRAL AVENUE

NORTH

PL

Groundwater Results MW-1		
MTBE	1.6	ppb

Groundwater Results MW-2		
TPHg	3,080	ppb
MTBE	1,970	ppb
TAME	787	ppb
ETBE	5.8	ppb
TBA	373	ppb
TPHd	520	ppb
TPHmo	312	ppb

Groundwater Results MW-3		
TPHg	379	ppb
MTBE	252	ppb
TAME	102	ppb
TPHd	63	ppb
TPHmo	76	ppb

Groundwater Results MW-5		
TPHg	12,000	ppb
BTXE	3,537.8	ppb
TPHd	1,350	ppb
TPHmo	177	ppb

Groundwater Results MW-4		
TPHg	5,270	ppb
BTXE	621.7	ppb
MTBE	14.2	ppb
TAME	1.9	ppb
TPHd	929	ppb
TPHmo	147	ppb

Groundwater Results MW-6		
Benzene	0.8	ppb
MTBE	8.2	ppb
TAME	3.2	ppb
TPHmo	87	ppb

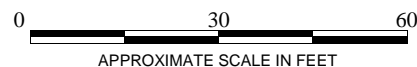
OFFICE

MURRAY ROAD

LEGEND



Monitoring Well



GROUNDWATER ANALYTICAL RESULTS

Figure

4

Bigfoot Gas
2801 Central Avenue
McKinleyville, California 95519

Project No.

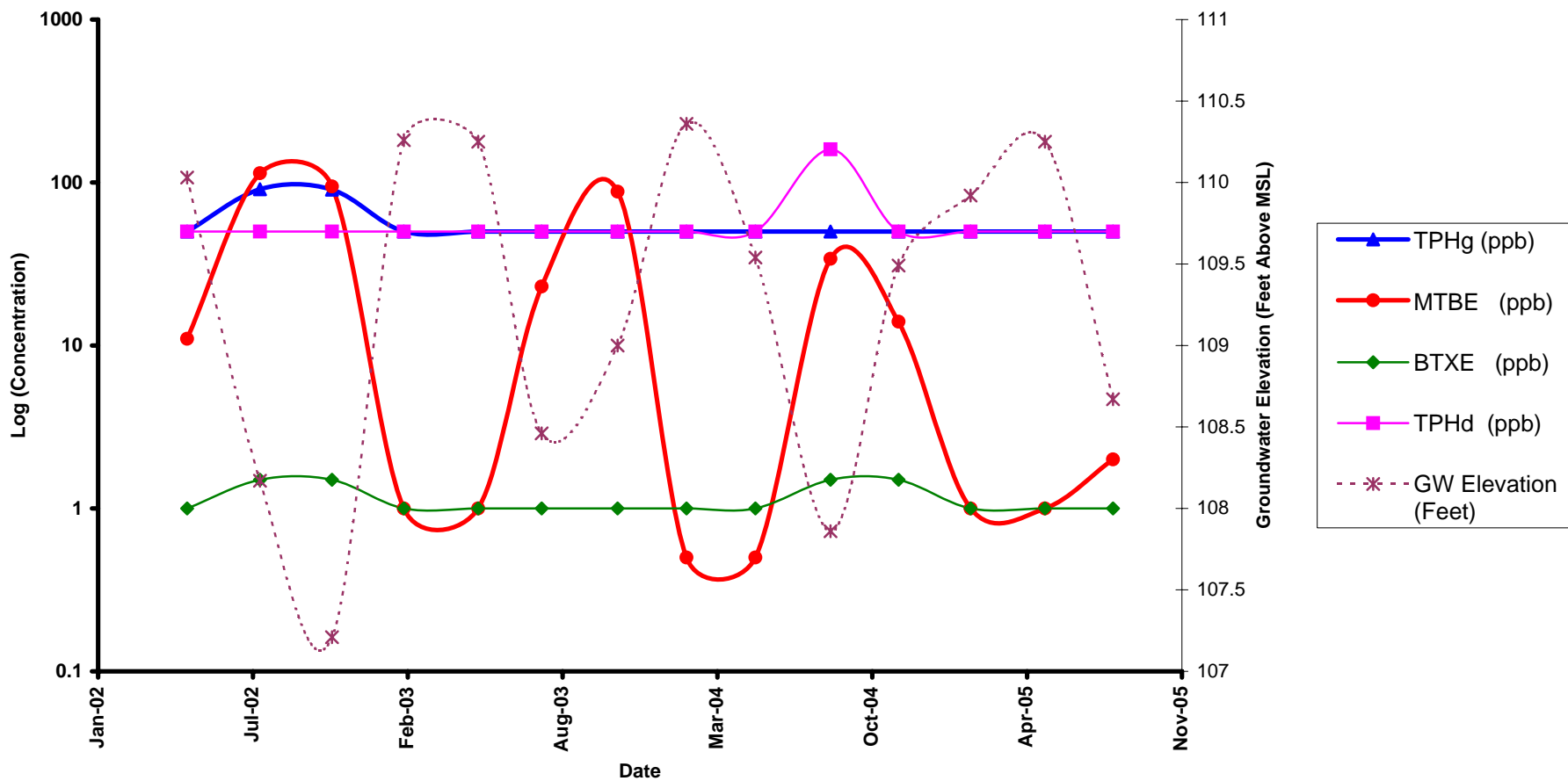
SP-120

Report Date

11/10/05

Environmental

Services



MW-1 HYDROCARBON CONCENTRATIONS VS. TIME

Bigfoot Gas
2801 Central Avenue
McKinleyville, California 95519

Project No.

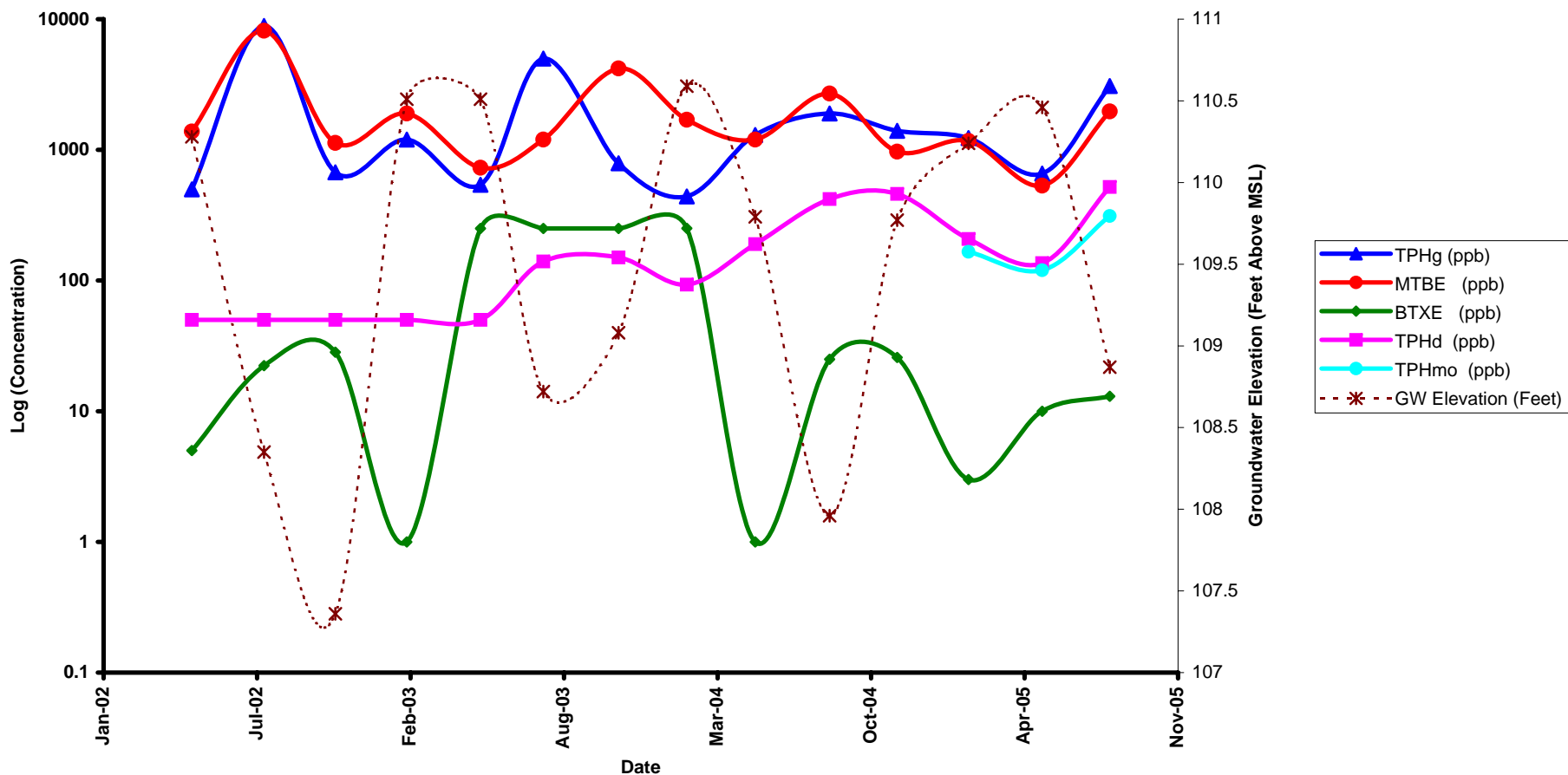
SP-120

Date

11/10/2005

Figure

5



MW-2 HYDROCARBON CONCENTRATIONS VS. TIME

Bigfoot Gas
 2801 Central Avenue
 McKinleyville, California 95519

Project No.

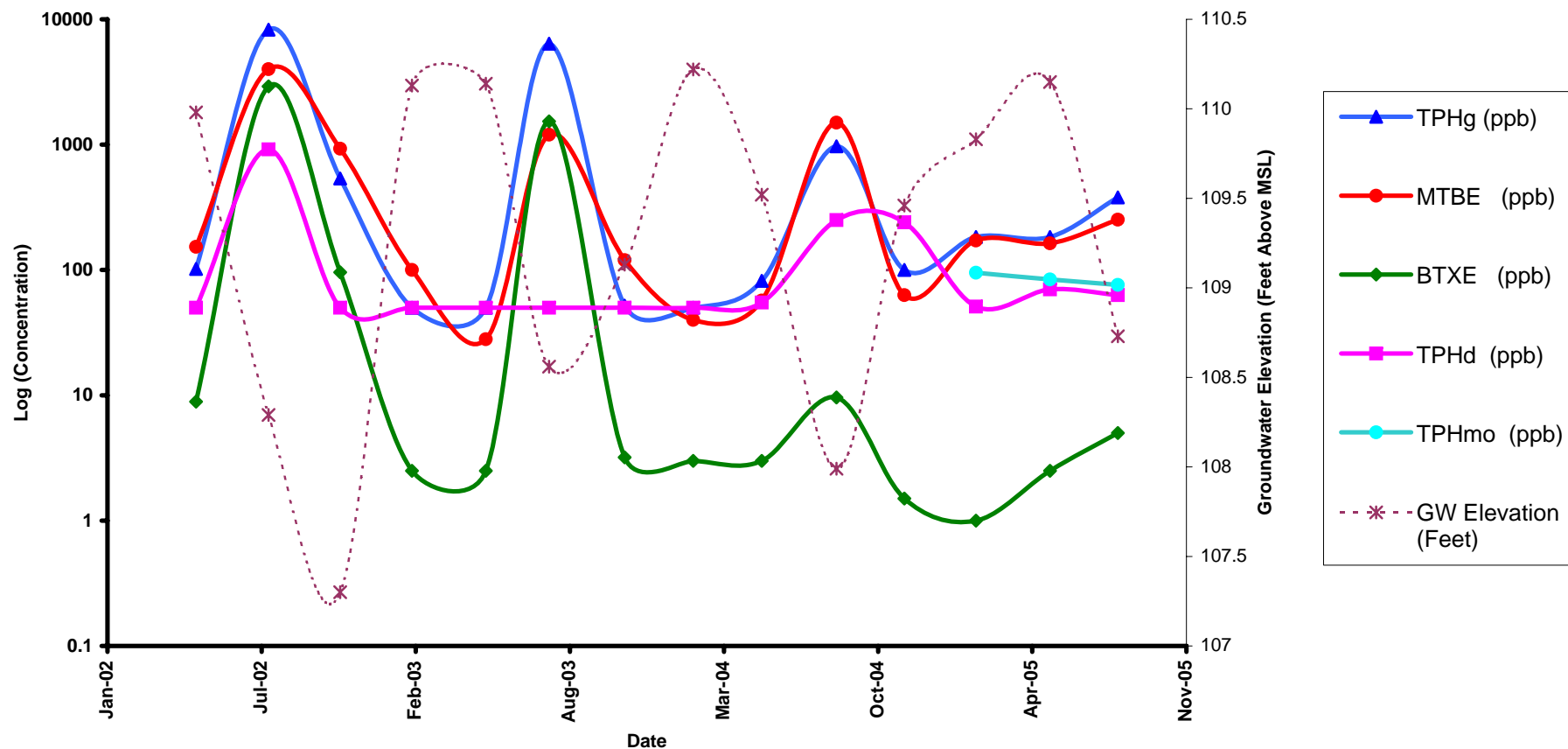
SP-120

Date

11/10/2005

Figure

6



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MW-3 HYDROCARBON CONCENTRATIONS VS. TIME

Bigfoot Gas
2801 Central Avenue
McKinleyville, California 95519

Project No.

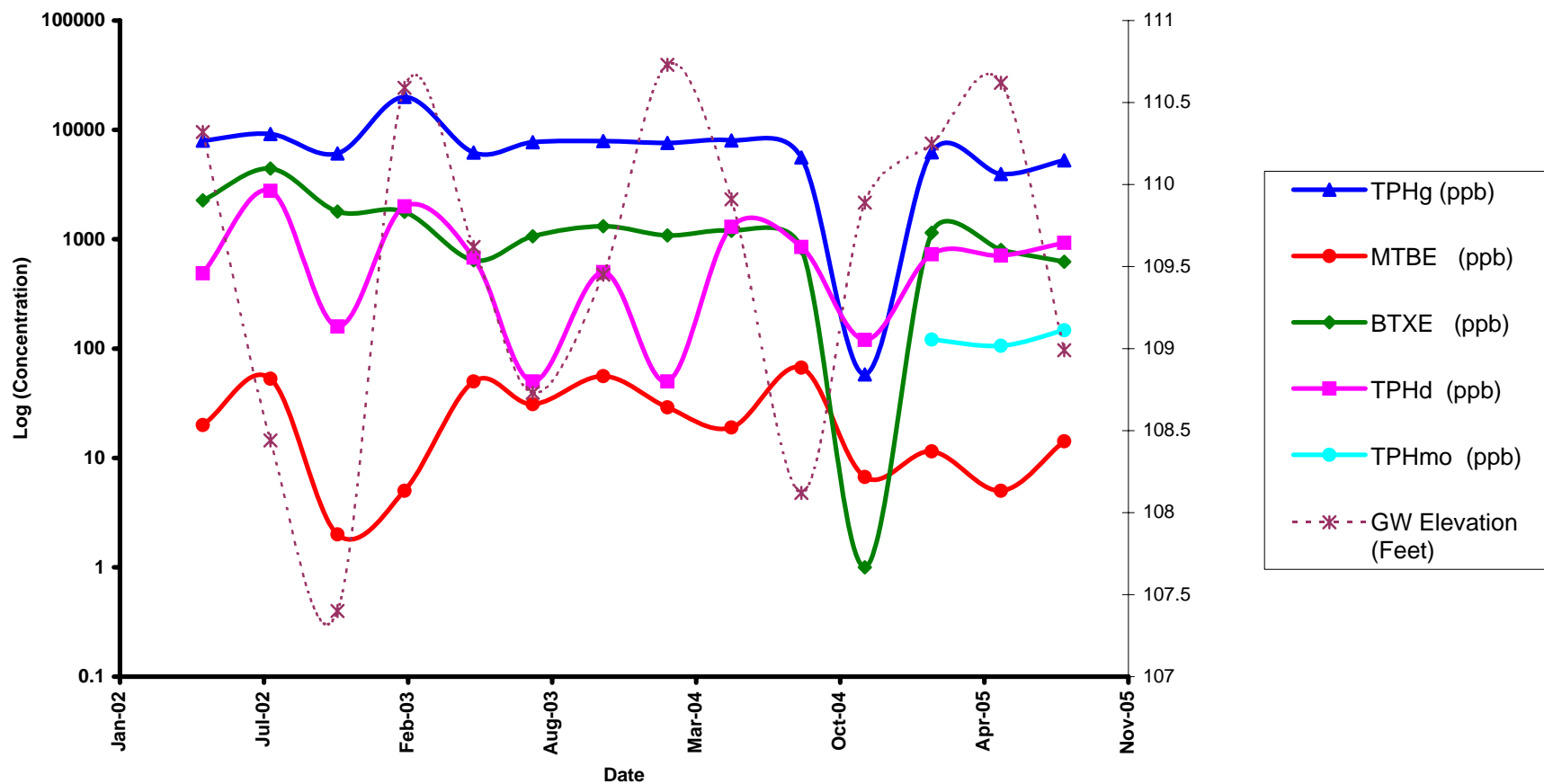
SP-120

Date

11/10/2005

Figure

7



MW-4 HYDROCARBON CONCENTRATIONS VS. TIME

Bigfoot Gas
2801 Central Avenue
McKinleyville, California 95519

Project No.

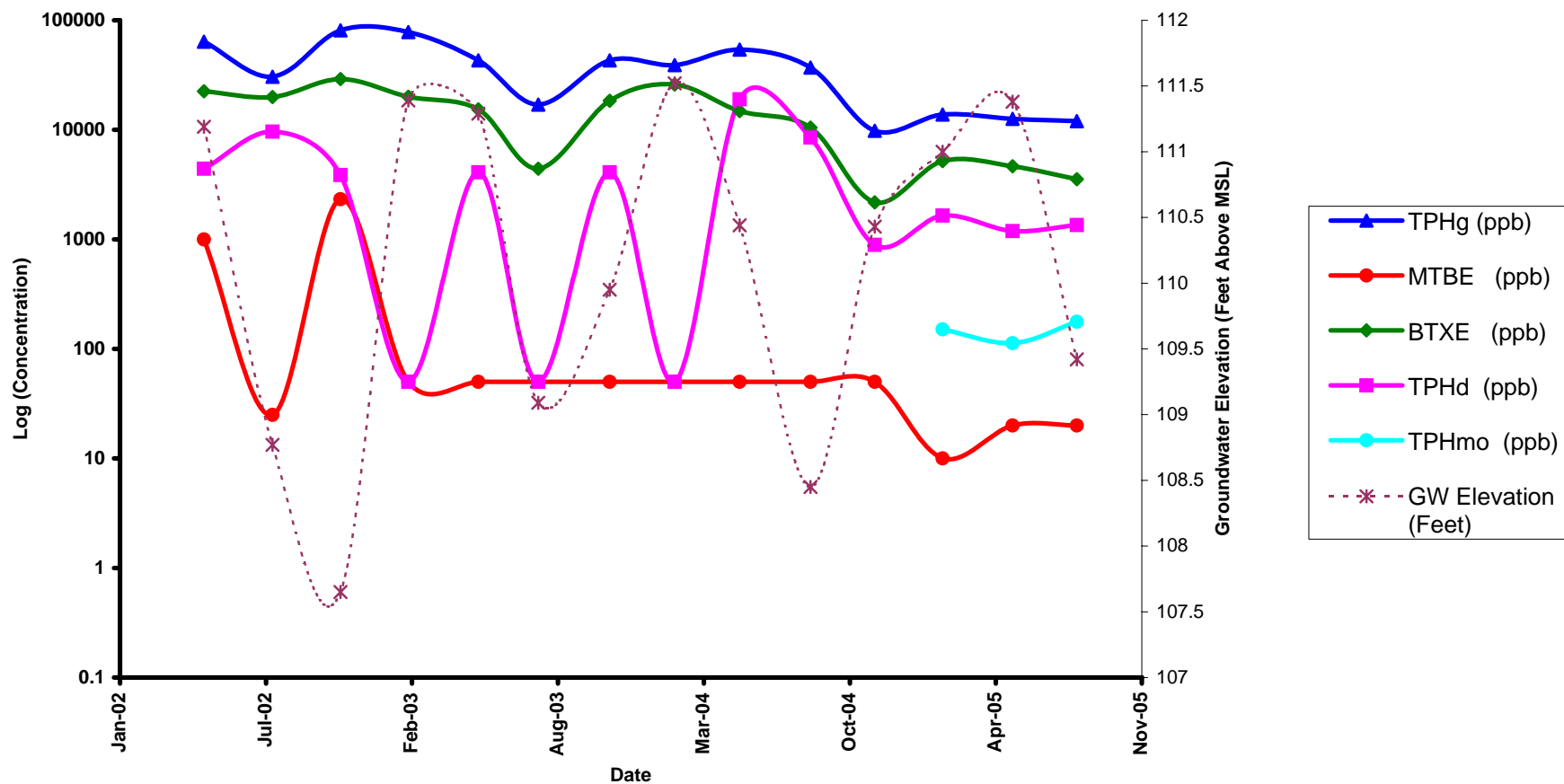
SP-120

Date

11/10/2005

Figure

8



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MW-5 HYDROCARBON CONCENTRATIONS VS. TIME

Bigfoot Gas
2801 Central Avenue
McKinleyville, California 95519

Project No.

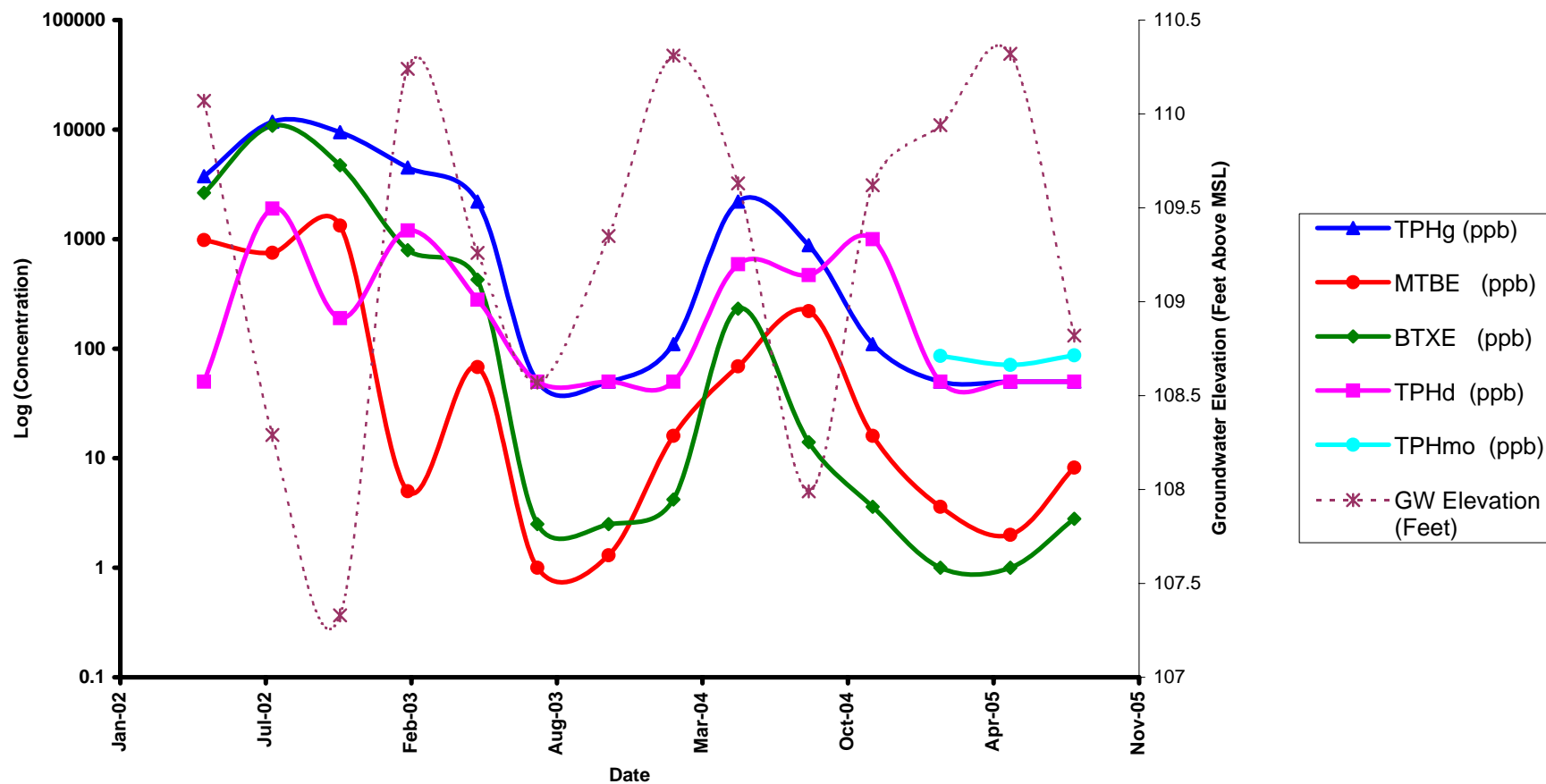
SP-120

Date

11/10/2005

Figure

9



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MW-6 HYDROCARBON CONCENTRATIONS VS. TIME

Bigfoot Gas
 2801 Central Avenue
 McKinleyville, California 95519

Project No.

SP-120

Date

11/10/2005

Figure

10

Appendices

Appendix A



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voice 530.243.7234 2218 Railroad Avenue
fax 530.243.7494 Redding, California 96001

August 26, 2005

Lab ID: 5080677

Andy Malone
SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549
RE: BIGFOOT GAS SP-120

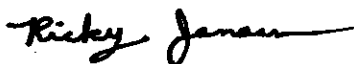
Dear Andy Malone,

Enclosed are the analysis results for Work Order number 5080677. All analysis were performed under strict adherence to our established Quality Assurance Plan. Any abnormalities are listed in the qualifier section of this report.

If you have any questions regarding these results, please feel free to contact us at any time. We appreciate the opportunity to service your environmental testing needs.

Sincerely,


For



Ricky D. Jensen
Laboratory Director
California ELAP Certification Number 1677

10/26/2005 10:00 AM
10/26/2005 10:00 AM



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voice 530.243.7234 2218 Railroad Avenue
fax 530.243.7494 Redding, California 96001

Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549

Attention: Andy Malone
Project: BIGFOOT GAS SP-120

Description: MW-1

Matrix: Water

Lab ID: 5080677-01

Lab No: 5080677
Reported: 08/26/05
Phone: 707-269-0884
P.O. #

Sampled: 08/09/05 00:00

Received: 08/12/05 10:57

Volatile Organic Compounds

<u>Analyte</u>	<u>Units</u>	<u>Results</u>	<u>Qualifier</u>	<u>MDL</u>	<u>RL</u>	<u>Method</u>	<u>Analyzed</u>	<u>Prepared</u>	<u>Batch</u>
Gasoline	ug/l	ND			50.0	EPA 8015/8260	08/12/05	08/12/05	B5H0333
Benzene	"	ND			0.5	"	"	"	"
Toluene	"	ND			0.5	"	"	"	"
Ethylbenzene	"	ND			0.5	"	"	"	"
Xylenes (total)	"	ND			1.0	"	"	"	"
Methyl tert-butyl ether	"	1.6			1.0	"	"	"	"
Di-isopropyl ether	"	ND			0.5	"	"	"	"
Tert-amyl methyl ether	"	ND			0.5	"	"	"	"
Ethyl tert-butyl ether	"	ND			0.5	"	"	"	"
Tert-butyl alcohol	"	ND			50.0	"	"	"	"
Surrogate: 4-Bromofluorobenzene		87.0 %			43-155	"	"	"	"

TPH Diesel & Motor Oil

<u>Analyte</u>	<u>Units</u>	<u>Results</u>	<u>Qualifier</u>	<u>MDL</u>	<u>RL</u>	<u>Method</u>	<u>Analyzed</u>	<u>Prepared</u>	<u>Batch</u>
Diesel	ug/l	ND			50	EPA 8015 MOD	08/22/05	08/15/05	B5H0334
Motor Oil	"	ND			50	"	"	"	"
Surrogate: Octacosane		97.0 %			50-150	"	"	"	"


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Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549

Attention: Andy Malone
Project: BIGFOOT GAS SP-120

Description: MW-2

Matrix: Water

Lab ID: 5080677-02

Lab No: 5080677
Reported: 08/26/05
Phone: 707-269-0884
P.O. #

Sampled: 08/09/05 00:00

Received: 08/12/05 10:57

Volatile Organic Compounds

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
Gasoline	ug/l	3080			250	EPA 8015/8260	08/12/05	08/12/05	B5H0333
Benzene	"	ND			2.5	"	"	"	"
Toluene	"	ND			2.5	"	"	"	"
Ethylbenzene	"	ND			2.5	"	"	"	"
Xylenes (total)	"	ND			5.0	"	"	"	"
Methyl tert-butyl ether	"	1970			100	"	08/12/05	"	"
Di-isopropyl ether	"	ND			2.5	"	08/12/05	"	"
Tert-amyl methyl ether	"	787			50.0	"	08/12/05	"	"
Ethyl tert-butyl ether	"	5.8			2.5	"	08/12/05	"	"
Tert-butyl alcohol	"	373			250	"	"	"	"
Surrogate: 4-Bromofluorobenzene		93.2 %			43-155	"	"	"	"

TPH Diesel & Motor Oil

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
Diesel	ug/l	520	D-01, D-02		50	EPA 8015 MOD	08/22/05	08/15/05	B5H0334
Motor Oil	"	312	D-02		50	"	08/22/05	"	"
Surrogate: Octacosane		96.1 %			50-150	"	"	"	"


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Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549

Attention: Andy Malone
Project: BIGFOOT GAS SP-120

Description: MW-3
Matrix: Water

Lab ID: 5080677-03

Lab No: 5080677
Reported: 08/26/05
Phone: 707-269-0884
P.O. #

Sampled: 08/09/05 00:00
Received: 08/12/05 10:57

Volatile Organic Compounds

<u>Analyte</u>	<u>Units</u>	<u>Results</u>	<u>Qualifier</u>	<u>MDL</u>	<u>RL</u>	<u>Method</u>	<u>Analyzed</u>	<u>Prepared</u>	<u>Batch</u>
Gasoline	ug/l	379			100	EPA 8015/8260	08/12/05	08/12/05	B5H0333
Benzene	"	ND			1.0	"	"	"	"
Toluene	"	ND			1.0	"	"	"	"
Ethylbenzene	"	ND			1.0	"	"	"	"
Xylenes (total)	"	ND			2.0	"	"	"	"
Methyl tert-butyl ether	"	252			10.0	"	08/12/05	"	"
Di-isopropyl ether	"	ND			1.0	"	08/12/05	"	"
Tert-amyl methyl ether	"	102			1.0	"	"	"	"
Ethyl tert-butyl ether	"	ND			1.0	"	"	"	"
Tert-butyl alcohol	"	ND			100	"	"	"	"
Surrogate: 4-Bromofluorobenzene		88.0 %			43-155	"	"	"	"

TPH Diesel & Motor Oil

<u>Analyte</u>	<u>Units</u>	<u>Results</u>	<u>Qualifier</u>	<u>MDL</u>	<u>RL</u>	<u>Method</u>	<u>Analyzed</u>	<u>Prepared</u>	<u>Batch</u>
Diesel	ug/l	63	D-02		50	EPA 8015 MOD	08/22/05	08/15/05	B5H0334
Motor Oil	"	76			50	"	"	"	"
Surrogate: Octacosane		98.3 %			50-150	"	"	"	"



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Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549

Attention: Andy Malone
Project: BIGFOOT GAS SP-120

Description: MW-4

Matrix: Water

Lab ID: 5080677-04

Lab No: 5080677
Reported: 08/26/05
Phone: 707-269-0884
P.O. #

Sampled: 08/09/05 00:00

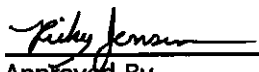
Received: 08/12/05 10:57

Volatile Organic Compounds

<u>Analyte</u>	<u>Units</u>	<u>Results</u>	<u>Qualifier</u>	<u>MDL</u>	<u>RL</u>	<u>Method</u>	<u>Analyzed</u>	<u>Prepared</u>	<u>Batch</u>
Gasoline	ug/l	5270			500	EPA 8015/8260	08/12/05	08/12/05	B5H0333
Benzene	"	59.5			1.2	"	08/12/05	"	"
Toluene	"	53.2			1.2	"	"	"	"
Ethylbenzene	"	210			5.0	"	08/12/05	"	"
Xylenes (total)	"	299			2.5	"	08/12/05	"	"
Methyl tert-butyl ether	"	14.2			2.5	"	"	"	"
Di-isopropyl ether	"	ND			1.2	"	"	"	"
Tert-amyl methyl ether	"	1.9			1.2	"	"	"	"
Ethyl tert-butyl ether	"	ND			1.2	"	"	"	"
Tert-butyl alcohol	"	ND			125	"	"	"	"
Surrogate: 4-Bromofluorobenzene		96.4 %			43-155	"	"	"	"

TPH Diesel & Motor Oil

<u>Analyte</u>	<u>Units</u>	<u>Results</u>	<u>Qualifier</u>	<u>MDL</u>	<u>RL</u>	<u>Method</u>	<u>Analyzed</u>	<u>Prepared</u>	<u>Batch</u>
Diesel	ug/l	929	D-01, D-02		50	EPA 8015 MOD	08/22/05	08/15/05	B5H0334
Motor Oil	"	147			50	"	"	"	"
Surrogate: Octacosane		103 %			50-150	"	"	"	"



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Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549

Attention: Andy Malone
Project: BIGFOOT GAS SP-120

Description: MW-5

Matrix: Water

Lab ID: 5080677-05

Lab No: 5080677
Reported: 08/26/05
Phone: 707-269-0884
P.O. #

Sampled: 08/09/05 00:00

Received: 08/12/05 10:57

Volatile Organic Compounds

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
Gasoline	ug/l	12000			1000	EPA 8015/8260	08/12/05	08/12/05	B5H0333
Benzene	"	ND			10.0	"	"	"	"
Toluene	"	45.8			10.0	"	"	"	"
Ethylbenzene	"	322			10.0	"	"	"	"
Xylenes (total)	"	3160			20.0	"	"	"	"
Methyl tert-butyl ether	"	ND			20.0	"	"	"	"
Di-isopropyl ether	"	ND			10.0	"	"	"	"
Tert-amyl methyl ether	"	ND			10.0	"	"	"	"
Ethyl tert-butyl ether	"	ND			10.0	"	"	"	"
Tert-butyl alcohol	"	ND			1000	"	"	"	"
Surrogate: 4-Bromofluorobenzene		93.8 %			43-155	"	"	"	"

TPH Diesel & Motor Oil

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
Diesel	ug/l	1350	D-01, D-02		50	EPA 8015 MOD	08/22/05	08/15/05	B5H0334
Motor Oil	"	177			50	"	"	"	"
Surrogate: Octacosane		102 %			50-150	"	"	"	"


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fax 530.243.7494 Redding, California 96001

Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549

Attention: Andy Malone
Project: BIGFOOT GAS SP-120

Description: MW-6

Matrix: Water

Lab ID: 5080677-06

Lab No: 5080677
Reported: 08/26/05
Phone: 707-269-0884
P.O. #

Sampled: 08/09/05 00:00


Received: 08/12/05 10:57

Volatile Organic Compounds

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
Gasoline	ug/l	ND			50.0	EPA 8015/8260	08/12/05	08/12/05	B5H0333
Benzene	"	0.8			0.5	"	"	"	"
Toluene	"	ND			0.5	"	"	"	"
Ethylbenzene	"	ND			0.5	"	"	"	"
Xylenes (total)	"	ND			1.0	"	"	"	"
Methyl tert-butyl ether	"	8.2			1.0	"	"	"	"
Di-isopropyl ether	"	ND			0.5	"	"	"	"
Tert-amyl methyl ether	"	3.2			0.5	"	"	"	"
Ethyl tert-butyl ether	"	ND			0.5	"	"	"	"
Tert-butyl alcohol	"	ND			50.0	"	"	"	"
Surrogate: 4-Bromofluorobenzene		93.2 %			43-155	"	"	"	"

TPH Diesel & Motor Oil

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
Diesel	ug/l	ND			50	EPA 8015 MOD	08/22/05	08/15/05	B5H0334
Motor Oil	"	87			50	"	"	"	"
Surrogate: Octacosane		102 %			50-150	"	"	"	"



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Basic Laboratory, Inc.

California D.O.H.S. Cert #1677



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voice 530.243.7234 2218 Railroad Avenue
fax 530.243.7494 Redding, California 96001

Report To: SOUNPACIFIC
4612 GREENWOOD HEIGHTS DR
KNEELAND, CA 95549
Attention: Andy Malone
Project: BIGFOOT GAS SP-120

Lab No: 5080677
Reported: 08/26/05
Phone: 707-269-0884
P.O. #

Notes and Definitions

D-02 Hydrocarbon pattern present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
D-01 This sample appears to contain volatile range organics.
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the detection limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference
< Less than reporting limit
≤ Less than or equal to reporting limit
> Greater than reporting limit
≥ Greater than or equal to reporting limit
MDL Method Detection Limit
RL/ML Minimum Level of Quantitation
MCL/AL Maximum Contaminant Level/Action Level
mg/kg Results reported as wet weight
TTLC Total Threshold Limit Concentration
STLC Soluble Threshold Limit Concentration
TCLP Toxicity Characteristic Leachate Procedure



Approved By

Basic Laboratory, Inc.
California D.O.H.S. Cert #1677

BASIC LABORATORY CHAIN OF CUSTODY RECORD
 2218 Railroad Avenue, Redding, CA 96001 (530) 243-7234 FAX 243-7494

CLIENT NAME: Soun Pacific				PROJECT NAME: Big Foot Gas				PROJECT #: SP-120		LAB #: 5080677			
ADDRESS: P.O. Box 13 Kneeland, CA, 95549				REQUESTED COMP. DATE: STD. 8-26-05				# SAMP: 6		PAGE 1 OF 1			
				TURN AROUND TIME: STD <input checked="" type="checkbox"/> RUSH <input type="checkbox"/>									
PROJECT MANAGER: Andy Malone				ANALYSES REQUESTED									
PHONE: 707-269-0884		FAX: 707-269-0699		E-MAIL: andy@sounpacific.com		INVOICE TO: Soun Pacific		PO#:		REP: I.D.# T0602300275 SYSTEM #: CUST. SEAL ICE QC = 1 2 3 4			
SPECIAL MAIL <input type="checkbox"/> E-MAIL <input checked="" type="checkbox"/> FAX <input type="checkbox"/>													
DATE	TIME	WATER	COMP	SOIL	SAMPLE DESCRIPTION	# OF BOTTLES	PHg	PHd	PHmd	BTEX	OxyS	LAB ID	REMARKS
8-9-05		X			MW-1	5	X	X	X	X	X	1	Also email's sounpacific@starbuck.net greg@sounpacific.com
					MW-2							2	
					MW-3							3	
					MW-4							4	
					MW-5							5	
					MW-6							6	
PRESERVATIONS HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> ZnAce/NaOH <input type="checkbox"/> HCL <input checked="" type="checkbox"/> Nathio <input type="checkbox"/>													
SAMPLED BY: Tien-yu Tai				DATE/TIME: 8-9-05				RELINQUISHED BY: Jeff Gaines				DATE/TIME: 8/10/05	
RECEIVED BY:				DATE/TIME:				RELINQUISHED BY:				DATE/TIME:	
RECEIVED BY:				DATE/TIME:				RELINQUISHED BY:				DATE/TIME:	
RECEIVED BY LAB: Penny J. O'Leary				DATE/TIME: 8-12-05 10:57				SAMPLE SHIPPED VIA: UPS POST BUS FED-EX OTHER					

Appendix B



Standard Operating Procedures

Groundwater Level Measurements and Free Phase Hydrocarbon Measurements

All SounPacific staff and contractors shall adopt the following procedures any time that groundwater elevations are determined for the purposes of establishing groundwater gradient and direction, and prior to any sampling event.

Wells are to be tested for free phase hydrocarbons (free product) before the first development or sampling of any new well, and in any well that has historically contained free product.

Equipment Checklist

- ☐ Combination water level / free phase hydrocarbon indicator probe (probe)
- ☐ Gauging Data / Purge Calculations Sheet
- ☐ Pencil or Pen/sharpie
- ☐ Disposable Gloves
- ☐ Distilled Water and or know water source on site that is clean
- ☐ Alconox (powder) or Liquinox (liquid) non-phosphate cleaners—do not use soap!
- ☐ Buckets or Tubs for decontamination station
- ☐ Tools necessary to access wells
- ☐ Site Safety Plan
- ☐ This Standard Operating Procedure
- ☐ Notify Job site business that you will be arriving to conduct work.

Procedure

1. Review Site Safety Plan and utilize personal protection appropriate for the contaminants that may be encountered.
2. Access and open all monitoring wells to be measured. Allow wells to equilibrate for approximately 15 minutes before taking any measurements.

3. Decontaminate probe with Alconox or Liquinox solution, and rinse with distilled water.
4. Determine the diameter of the well to be measured and indicate this on the Gauging Data / Purge Calculations Sheet.
5. Words of caution: Please be careful with water level and product meters probes are not attached with high strength material so please make sure to avoid catching the end on anything in the well and make sure not to wind reel to the point that it could pull on the probe. ***If product is suspect in a well, go to step 6, if no product is suspected go to step 7 below.***
6. **When product is present or suspected:** use the product level meter. Clip the static charge clamp to the side of the well casing. Then lower probe into the well through the product/water interface about one foot if possible. Then slowly raise the probe back up through the product/water interface layer and record the level as the tone changes from solid to broken-record this level in the Gauging Data / Purge Calculations Sheet to the nearest 0.01 foot (DTP). Continue to raise the probe up through the product until the tone stops completely-record this level on the Gauging Data / Purge Calculations Sheet to the nearest 0.01 foot (DTW). Then go to step 8.
7. **When no product is present or suspected:** If no free product is present, record the depth of the water (to the nearest 0.01 foot) relative to the painted black mark on the top of the well casing. Leave the probe in the well just a hair above the water level to ensure the well as equilibrated. As the well rises, the tone will sound. Make sure no increase in water levels have occurred in over a ten-minute period. Water levels can lower as well as rise. Make sure you note when the level you keep lowering the probe to has remained stable for at least ten minutes. Once this has been accomplished, please record this level in the Gauging Data / Purge Calculations Sheet to the nearest 0.01 foot (DTW).
8. Turn off the probe, and use the probe to determine the depth to the bottom of the well relative to the top of the well casing. This is the depth to bottom measurement (DTB).
9. Decontaminate probe and tape by washing in an Alconox/Liquinox solution (***read directions on solution for ratio of water to cleanser***) and use the toothbrush provided to remove any foreign substance from the probe and tape. Then triple rinse probe and tape with clean water and then proceed to take measurements in the next well.
10. If sampling is to occur, proceed to implement SounPacific's Standard Operating Procedure for Monitoring Well Purging and Sampling. If no sampling is to be performed, close and secure all wells and caps.



Standard Operating Procedures

Monitoring Well Purging and Groundwater Sampling

All SounPacific employees and contractors shall adopt the following procedures any time that groundwater samples are to be taken from an existing groundwater monitoring well.

Prior to the implementation of these procedures, the groundwater level **MUST** be measured and the presence of free phase hydrocarbons determined in accordance with SounPacific's Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements.

Equipment Checklist

- ☐ **Gauging Data / Purge Calculations Sheet used for water level determination**
- ☐ Chain of Custody Form
- ☐ pH/ Conductivity / Temperature meter
- ☐ Pencil or Pen
- ☐ Indelible Marker
- ☐ Calculator
- ☐ Disposable Gloves
- ☐ Distilled Water
- ☐ Alconox/liquinox liquid or powdered non-phosphate cleaner
- ☐ Buckets or Tubs for decontamination station
- ☐ Bottom-filling bailer or pumping device for purging
- ☐ Disposable bottom-filling bailer and emptying device for sampling
- ☐ String, twine or fishing line for bailers
- ☐ Sample containers appropriate for intended analytical method (check with lab)
- ☐ Sample labels
- ☐ Site Safety Plan
- ☐ Tools necessary to access wells
- ☐ Drum space on site adequate for sampling event

SounPacific Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements, Page 2 of 3

Procedure

1. Review Site Safety Plan and utilize personal protection appropriate for the contaminants that may be encountered.
2. Measure groundwater levels and check for the presence of free product in accordance with the Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements.

Purging

3. Calculate and record the volume of standing water in each well using the information provided on the Gauging Data / Purge Calculations sheet.
 $(DTB-DTW) \times \text{Conversion Factor} = \text{Casing Volume}$.
4. The purge volume shall be at least three times and no more than seven times the volume of standing water (the casing volume).
5. Purge the well by bailing or pumping water from the well into a calibrated receptacle, such as a five gallon bucket or tub with markings to indicate one gallon increments. Collect purgeate in a 55 gallon labeled drum and store on site. Drum labels should include the date, contents, site number, and SounPacific's name and telephone number.
6. Take measurements of pH, conductivity, temperature, and visual observations to verify the stabilization of these parameters. At least five measurements of these parameters should be made throughout the purging process. The parameters shall be considered stabilized if successive measurements vary by less than 0.25 pH units, 10% of conductivity in μS , and 1°C (or 1.8°F). Continue purging until at least three times the casing volume has been removed, and the measured parameters have stabilized as indicated above. Do not exceed seven casing volumes.
7. Take a final depth to groundwater measurement and calculate the casing volume of the recharged well. Ideally, the casing volume should have recharged to at least 80% of the original measured casing volume before sampling commences. If due to slow recharge rates it is not feasible to wait for the well to fully recharge, then note this on the Gauging Data / Purge Calculation Sheet and proceed to sample following the procedure below.

Sampling

8. **After completing groundwater measurement, and checking for free product if necessary, in accordance with SounPacific's Standard Operating Procedures for Groundwater Level Measurements and Free Phase Hydrocarbon Measurements, and after purging monitoring wells as described above, groundwater samples may be collected.**
9. Slowly lower a clean, previously unused disposable bailer into the well water approximately half of the bailer length, and allow the bailer to slowly fill.
10. Withdraw the full bailer from the monitoring well and utilize the included (clean and unused) bottom-emptying device to fill the necessary sample containers, and seal the container with the included PTFE (Teflon) lined cap.
11. When filling VOAs, fill the VOA completely full, with the meniscus rising above the rim of the bottle. Carefully cap the VOA and invert it and gently tap it to determine whether air bubbles are trapped inside. If the VOA contains air bubbles, refill the VOA and repeat this step.
12. All samples shall be labeled with the Sample ID, the Sample Date, and the Sample Location or Project Number. Use an indelible marker for writing on sample labels.
13. Record all pertinent sample data on the Chain of Custody.
14. Place samples in an ice chest cooled to 4°C with ice or "blue ice". Bottles should be wrapped in bubble wrap, and VOA's should be inserted in a foam VOA holder to protect against breakage. Samples are to be kept at 4°C until delivered to the laboratory. Any transference of sample custody shall be indicated on the Chain of Custody with the appropriate signatures as necessary.
15. Utilize clean, previously unused gloves, bailer and line, and bottom-emptying device for each well sampled.
16. When finished with all sampling, close and secure all monitoring wells.
17. Leave the site cleaner than when you arrived and drive safely.

Appendix C

GAUGING DATA/PURGE CALCULATIONS

Client/Sites: Big Foot GasJob No.: SP-120Event: 13th Q Sampling EventDate: 8-9-05


Sun Pacific
Environmental Services
(707) 269-0884

9/6/05

Well No.	DIA (in.)	DTB (ft.)	DTW (ft.)	ST (ft.)	CV (gal.)	PV (gal.)	SPL (ft.)	Boiler Loads	Notes
MW-1	2	11.90	2.90	9.00	1.5	4.5			
MW-2	2	9.14	4.16	4.98	1.00	3.0			
MW-3	2	11.50	3.40	8.10	1.30	3.9			
MW-4	2	11.49	3.77	7.72	1.25	3.75			
MW-5	2	11.20	3.20	8.00	1.30	3.4			
MW-6	2	11.00	3.55	7.45	1.20	3.6			

Explanation:

DIA = Well Diameter

DTB = Depth to Bottom

DTW = Depth to Water

ST = Saturated Thickness (DTB-DTW)

CV = Casing Volume (ST x cf)

PV = Purge Volume (standard 3 x CV, well development 10 x CV)

SPL = Thickness of Separate Phase Liquid

Conversion Factors (cf):

2 in. dia. well cf = 0.16 gal./ft.

4 in. dia. well cf = 0.65 gal./ft.

6 in. dia. well cf = 1.44 gal./ft.

Sampler:

Tien-yu Tai



Well Gauging/Sampling Report

Sheet 1 of 6

Date: 8-9-05 Project Name: Bigfoot Gas Project No: SP-120 Well Number: MW-1

Analyses Tested: TPH_g, BTXE, 5-OX_gs, TPH_d, TPH_m

Sample Containers: 3 HCl Vials, 2 1-L amber bottles

Purge Technique: ☐ Bailor ☒ Pump

Sounder Used: ☐ Water Meter ☒ Interface Meter

Water & Free Product Levels

Time	Depth to Water	Depth to Product	Notes
12:11 p	2.90		no sheen
12:36	2.90		

Field Measurements

Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond (mc/cm)	DO (mg/L)	TOR (%)	
3:16p	0	7.22	64.97	0.221	0.38	4.1	
3:22	1.5	7.16	58.80	0.208	0.30	3.0	
3:27	3.0	7.14	58.54	0.196	0.32	3.1	
3:31	4.5	7.11	58.54	0.191	0.36	3.5	

Field Scientist: Tien-ya Tai

Well Gauging/Sampling Report

Sheet 2 of 6

Date: 8-9-05 Project Name: Bigfoot Gas Project No: SP-00 Well Number: MW-2

Analysis Tested: TPH_g, BTXE, 5-oxyg, TPH_d, TPH_m

Sample Containers: (3) HCl VOAS, 2- 1-L amber bottles

Purge Technique: ☐ Bailor ☒ Pump

Sounder Used: ☐ Water Meter ☒ Interface Meter

Water & Free Product Levels

Time	Depth to Water	Depth to Product	Notes
12:05 p	4.1		no sheen
12:31	4.15		"
12:50	4.16		"
end			

Field Measurements

Time	Total Vol. Removed(gal)	pH	Temp(F)	Cond (mS/cm)	DO(mg/L)	DOV(%)	
2:35p	0	6.95	59.46	0.794	0.37	3.7	
2:43	1	6.99	57.76	0.771	0.37	3.6	
2:47	2	6.99	57.77	0.769	0.40	3.9	
2:51	3	7.00	57.70	0.753	0.43	4.2	

Field Scientist: Tien-yu Tai

Well Gauging/Sampling Report

Sheet 3 of 6

Date: 8-9-05 Project Name: Bigfoot Gas Project No: SP-120 Well Number: MW-3

Analyses Tested: TPH₃, BTXE, 5-oxy₃, TPH₄, TPH₅

Sample Containers: 3 HCl Vials, 2- 1-L amber bottles

Purge Technique: ☐ Bailor ☒ Pump

Sounder Used: ☐ Water Meter ☒ Interface Meter

Water & Free Product Levels

Time	Depth to Water	Depth to Product	Notes
12:16 p	3.40		green
12:40	3.40		"
end			

Field Measurements

Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond (µm/cm)	DO (mg/L)	DO (%)	
3:48 p	0	6.83	65.67	0.300	0.24	2.5	
3:53	1.3	6.77	63.91	0.314	0.36	3.1	
3:59	2.6	6.78	62.99	0.317	0.39	4.1	
4:02	3.9	6.83	62.50	0.313	0.42	4.3	

Field Scientist: Tien-yu Tai



Well Gauging/Sampling Report

Sheet 4 of 6

Date: 8-9-05 Project Name: Bigfoot Gas Project No. SP-120 Well Number: MW-4

Analyses Tested: TPH_g, BTXE, 5-oxy_s, TPHe, TPHe_{ms}

Sample Containers: 3 HCl VOAS, 2 1-L amber bottles

Purge Technique: ☐ Bailor ☒ Pump

Sounder Used: ☐ Water Meter ☒ Interface Meter

Water & Free Product Levels

Time	Depth to Water	Depth to Product	Notes
12:01 p	3.77		Seen
12:26	3.77		"

Field Measurements

Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond (µm/cm)	DO (mg/L)	DO (%)	
2:03 p	0	7.20	74.41	0.484	0.34	4.6	
2:08	1.25	7.17	66.03	0.430	0.37	4.0	
2:12	2.5	7.14	65.84	0.425	0.38	4.1	
2:15	3.75	7.22	66.74	0.413	0.40	4.4	

Field Scientist:

Tien-ya Tai



Well Gauging/Sampling Report

Sheet 5 of 6

Date: 8-9-05 Project Name: Bigfoot Gas Project No. SP-120 Well Number: MW-5

Analyses Tested: TPHg, BTXE, 5-oxys, TPHd, TPHmw

Sample Containers: 3 HCl WAS, 2 1-L amber bottles

Purge Technique: ☐ Bailor ☒ Pump

Sounder Used: ☐ Water Meter ☒ Interface Meter

Water & Free Product Levels

Time	Depth to Water	Depth to Product	Notes
11:50 a	3.20		no show
12:24	3.20		"
end			

Field Measurements

Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond (ms/cm)	DO (mg/L)	DO (%)	
1:27 p	0	7.01	68.14	0.407	1.61	17.8	
1:31	1.3	7.00	65.44	0.344	1.05	11.2	
1:34	2.6	7.02	65.50	0.346	0.95	10.2	
1:38	3.9	7.00	65.47	0.347	0.90	9.7	

Field Scientist:

Tien-gu Tai



Well Gauging/Sampling Report

Sheet 6 of 6

Date: 8-9-05 Project Name: Bigfoot Gas Project No: SP-120 Well Number: MW-6

Analyses Tested: TPH_g, BTXE, 5 ocs, TPH_d, TPH_m

Sample Containers: 3 HCl WQAS, 2 1-L amber bottles

Purge Technique: ☐ Bailor ☒ Pump

Sounder Used: ☐ Water Meter ☒ Interface Meter

Water & Free Product Levels

Time	Depth to Water	Depth to Product	Notes
12:22 p	3.56		Shear
12:46	3.56		"
end			

Field Measurements

Time	Total Vol. Removed (gal)	pH	Temp (F)	Cond. (µm/cm)	DO (mg/L)	DO (%)	
4:18 p	0	7.01	67.47	0.228	0.20	2.1	
4:22	1.2	6.98	64.08	0.222	0.29	3.1	
4:25	2.4	6.97	63.99	0.229	0.27	2.8	
4:30	3.6	6.93	63.12	0.240	0.23	2.3	

Field Scientist: Tien-yu Tai